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Final

**Technical Memorandum
Findings of Expanded Site Inspection
Site 17 (Building 278/279)**

**St. Juliens Creek Annex
Chesapeake, Virginia**

**CTO - 0150
September 2001**

Prepared for

**Department of the Navy
Atlantic Division
Naval Facilities Engineering Command**

Under the

**LANTDIV CLEAN II Program
Contract N62470-95-D-6007**

Prepared by



CH2MHILL

SIGNATURE PAGE

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St. Juliens Creek Annex
Chesapeake, Virginia

Contract Task Order 150
September 2001

Prepared by

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Site 17 - St Juliens Creek Annex - Technical Memorandum

Introduction

This Technical Memorandum describes the field activities and presents findings of the expanded site inspection for Installation Restoration Program (IRP), Site 17 (Building 279) at the St. Juliens Creek Annex (SJCA), Chesapeake, Virginia. The memorandum is prepared under the Naval Facilities Engineering Command (NAVFACENGCOM) U.S. Naval Facilities Engineering Command, Atlantic Division (LANTDIV) Navy Contract N62470-95-D-6007 Navy Comprehensive Long-Term Environmental Action Navy (CLEAN), District III, Contract Task Order-0150. The technical approach and Site specific procedures implemented in this investigation are described in the "Final Work Plan and Sampling Analysis Plan, Expanded Site Inspection for Installation Restoration Program, Site 17 (Building 279), St. Juliens Creek Annex, Chesapeake, Virginia" dated January 2001.

The objective of this project is to collect, evaluate, and document sufficient data from Site 17 to determine if this site will require No Further Action (NFA) or that there is sufficient evidence of contamination to require further investigation. This memorandum describes field activities conducted to accomplish the project objectives, summarizes the laboratory analytical results, and proposes future action at the site. Figures, tables, and site photos referenced throughout the text are provided at the end of the memorandum.

Site Description and History

The SJCA facility is situated at the confluence of St. Juliens Creek and the Elizabeth River in the city of Chesapeake, located in southeastern Virginia (Figure 1, Attachment A). SJCA began operations as a naval ammunitions facility in 1849. For a majority of its history, the SJCA facility has been used for the storage and transportation of ammunitions and ordnance. The current primary mission of the SJCA facility is to provide a radar testing range and various administrative and warehousing facilities for the nearby Norfolk Naval Shipyard and other local Navy activities. SJCA also provides administrative offices, light industrial shops and storage facilities for tenant naval commands.

Information concerning the history of Site 17 was obtained primarily from the St. Juliens Creek Annex Facility, Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) report prepared by A.T. Kearney, Inc., 1989, and the Relative Risk Ranking (RRR) System Data Collection Report prepared by CH2M Hill Federal Group, Ltd., 1996.

According to the Navy Assessment and Control of Installation Pollutants (Navy, 1981), the building was used for lead battery maintenance after 1954. Waste acid electrolyte was collected in containers and transported off base for disposal.

During the RFA, observations indicated a concrete storage pad was used to store two 55-gallon drums of PD-680, a commercial product used as a degreaser. PD-680 is a Stoddard solvent, a petroleum distillate and does not contain any chlorinated volatile organic compounds. Stains on the ground near the pad, as well as indications of poor management (overflowing catchbucket under drum spigot) were noted during the RCRA site visit. Signage located inside of Building 278/279 indicate that the building was also used for forklift maintenance.

Physical Setting

The facility covers approximately 490 acres and includes 221 buildings, 653 feet of wharf, a central heating plant, numerous non-operational industrial facilities, and miscellaneous structures including a housing area. Virginia Power Company owns property that runs diagonally across the facility in a northwest-southeast trending direction, splitting the area roughly in half.

Site 17 is an area located within the industrial section, in the southeast portion of SJCA (Figure 2). The site contains a concrete storage pad located outside, and along the east side, of Building 279. Building 279 is physically connected to Building 278 and has been renamed Building 278/279. The storage pad is curbed along the south edge and is also divided with a curb that runs from the building to the road (Photo 1). Runoff from the storage pad would therefore be expected to be off the un-curbed north edge of the pad. From there, runoff potentially runs through an opening under the building at the east corner. Building 279 is constructed on concrete piers allowing drainage to run under the building and into a drainage feature that flows to the pond at Site 2 (Landfill B) (Photo 2). Under the building, the eastern side is shored with old railroad ties, the western & northern slope is shored with concrete and the southern side is open. Surface water runoff will flow from Site 17 to the adjacent pond. This pond is tidally influenced because it is connected to St. Juliens Creek via a culvert. Under very high tide conditions, water from the pond may flow up the drainage feature and underneath Building 279. Runoff channels are evident beneath the building (Photo 3).

Regional and Site Specific Geology and Hydrogeology

The SJCA facility is situated on a low-lying wedge of land between the Southern Branch of the Elizabeth River and St. Juliens Creek. Elevations range from sea level along the banks of the two bordering waterways, and along Blows Creek located in the northern part of the facility, to 15 feet above mean sea level (msl) northeast of Blows Creek. A northwest-southeast trending ridge generally bisects the area, dividing the St. Juliens Creek drainage basin to the southwest and the Blows Creek drainage basin to the northeast.

The SJCA facility is located in the outer Atlantic Coastal Plain Physiographic Province. A sediment wedge dips and thickens to the east and extends approximately 20 miles east to the Atlantic Ocean. These sediments overlie basement rocks, which are made up of downfaulted Triassic strata and Paleozoic igneous and metamorphic rocks, similar to those in the Piedmont Province. The contact between the basement rocks and the sediments, also known as the fall line, is exposed approximately 80 miles to the west of the facility.

The Annex is underlain by over 2,000 feet of gently dipping Recent to Lower Cretaceous sandy sediments. Geologic units underlying the area, from youngest to oldest are: the Columbia Group (Sand Bridge and Norfolk Formations), the Chesapeake Group (Yorktown and Calvert Formations), the Pamunkey Group (Nanjemoy Formation), the Mattaponi Formation, transitional beds, and the Patuxent Formation.

The uppermost geologic unit is the Columbia Group. The Columbia Group is approximately 60 feet thick in southeastern Virginia. The upper 20 to 40 feet make up the unconfined Columbia aquifer, and consist of unconsolidated fine sands and silts with low to moderate permeability. The lower 20 to 40 feet consist of relatively impermeable silt, clay, and sandy clay. The Sand Bridge Formation is made up of tidal channel clayey sand facies and a shoal lagoonal silty sand facies. The tidal channel facies is made up of clayey sand, silt, and clay to well sorted fine to medium sand. This facies has low to high plasticity, low to moderate permeability, good erosion resistance, fair slope stability and fair to good aquifer recharge. The shoal lagoonal facies is made up of a clean, homogeneous, fine to medium sand with silt concentrations of 10% to 35%, and a thickness of 12 to 14 feet. This facies has a low to moderate plasticity; moderate permeability, erosion resistance, and slope stability; and fair aquifer recharge. The Norfolk Formation, which underlies the Sandbridge Formation, is made up of an upper member which consists of brackish marine silty sand and fluvial-estuarine silty sand, and a lower member which consists of clean quartz sand and fine gravel.

The two significant shallow aquifer systems in the area are the Columbia aquifer located in the upper 20 to 40 feet of the Columbia Group, and in the underlying Yorktown Aquifer. The Columbia aquifer, which comprises the water table aquifer, is reportedly thin and consists of discontinuous heterogeneous sand and shell lenses. The depth to the water table at the Annex is usually 5 feet or less. The Yorktown Aquifer is separated from the water table aquifer by a clay layer in the upper Yorktown. Water bearing zones in the Yorktown Aquifer consist of fine to coarse sands and gravels.

Surficial geology of the Annex includes the Sand Bridge Formation, alluvial sand, and marsh sediments. The clayey sand facies of the Sand Bridge Formation occurs on the eastern portion of the Annex facility, and the silty sand facies occurs on the western portion of the facility. The alluvial sand and marsh sediments occur along both Blows Creek and St. Juliens Creek. The Norfolk and Yorktown Formations underlie the surficial deposits on the Annex.

No subsurface investigations were conducted at Site 17, however an indication of the geology beneath the site is provided by borings drilled during the Remedial Investigation at Site 2, located immediately south of Site 17. The boring log from monitoring well SJS02-MW5D, located approximately 430 feet south-southwest of the concrete pad at Building 278/279, indicates that the upper 17 feet of the subsurface consists predominantly of fine sand with little silt. One 1.5-ft thick clay layer was encountered at a depth of approximately 2 ft. A thicker silt and clay layer was encountered from approximately 17 to 25 feet below surface. The interval from 25 feet below surface to about 30.5 feet below surface consists of a mixture of fine to medium to sand with some clay. These materials comprise the Columbian Aquifer.

The uppermost part of the Yorktown Formation, a greenish-gray clay, is found at a depth of about 30.5 feet and extends to approximately 38 ft below ground surface. The Yorktown Aquifer, consisting of coarse shell fragments and minor quartz gravel was encountered to a depth of 51.5, the final depth of the boring.

Blows Creek and St. Juliens Creek receive the majority of surface water runoff from the Annex. Both creeks flow east to empty into the Southern Branch of the Elizabeth River. The remaining runoff from the Annex flows directly into the Southern Branch of the Elizabeth River, or is diverted into storm drains that empty either into the Elizabeth River or St. Juliens Creek. The Southern Branch of the Elizabeth River flows through a highly industrialized area, which includes oil storage, cresol facilities, and fertilizer plants. The river, which is part of the Intracoastal Waterway, is used by many recreational boaters during the summer and by larger commercial and naval vessels throughout the year. The Southern Branch of the Elizabeth River flows north to discharge into the James River, which flows into the Chesapeake Bay. The entire downstream portion of surface water is tidally influenced.

The SJCA facility was initially placed within the boundaries of the 100-year flood plain. However, a 1984 Environmental Assessment Addendum indicated that according to the 1983 National Flood Insurance Program flood maps, the 100-year flood level for the originally proposed SJCA facility is 8.5 feet above msl. Elevations for the majority of the Annex property are above 8.5 feet msl and therefore do not lie within the 100-year flood plain. Areas within the 100-year flood plain include those adjacent to St. Juliens Creek, Blows Creek, and the southern border of the Elizabeth River.

As mentioned above, drainage at Site 17 is to the swale beneath the building then to the pond at Site 2 (Landfill B). The pond is connected to St. Juliens Creek, via a culvert, and is therefore tidally influenced.

Previous Site 17 Investigations

The site was originally identified as a satellite storage area during the 1989 RFA performed by A.T. Kearney. At that time it was identified as Area of Concern (AOC) A. No samples were collected during the RFA.

Soil and groundwater samples were collected during the RRR data collection study and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/Polychlorinated Biphenyls (PCBs) and Target Analyte List (TAL) inorganics (Attachment B). One soil sample (SJC17SS01) was located along the eastern side of the building and one groundwater sample (SJC17GW01) was collected south of the building, between the building and the drainage feature that leads to Site 2 (Landfill B). This would presumably be downgradient of the building.

The soil sample was collected from a depth of 0 to 1 ft below ground surface (bgs) with a decontaminated stainless steel trowel. In addition to inorganic constituents, the following organic constituents were detected in the soil sample: DDD (84 PD ug/kg; "P" indicates that the concentration showed greater than 25% difference between the columns and the lower value is reported, "D" indicates the sample was a dilution) DDE (210 D ug/kg), DDT (290 PD ug/kg), alpha-chlordane (4.1 P ug/kg), Aroclor-1254 (580 PD ug/kg), dieldrin (27

ug/kg), gamma-chlordane (4.7 P ug/kg), bis (2-ethylhexyl) phthalate (620 J ug/kg; "J" indicating an estimated value), and several polynuclear aromatic hydrocarbons (PAHs). The PAHs included benzo(a)anthracene (520 J ug/kg), benzo(b)fluoranthene (740 J ug/kg), benzo(a)pyrene (470 J ug/kg), chrysene (430 J ug/kg), fluoranthene (1200 J ug/kg), phenanthrene (430 J ug/kg) and pyrene (710 J ug/kg).

The ground water sample was collected from the water table aquifer using a Geoprobe®. Several common inorganic constituents were detected but no organic constituents were detected in the groundwater sample. Groundwater and soil data from the RRR are attached.

Site Investigation and Field Activities

This section discusses the rationale for the field investigation approach and describes the field investigation activities.

Sampling Rationale and Sampling Locations

Contaminants released during a spill from the site would have flowed off the un-curbed north edge of the concrete pad, and onto the adjacent soils. Along the edge of the building, north of the concrete pad, there is an opening to the space beneath the building (Photo 1 of Attachment C). It is expected that runoff from the pad would flow from the edge of the pad, to the opening, and then along the swale that runs under the building, and finally, to the drainage feature that enters the adjacent pond (Site 2-Landfill B). Due to the relative small volume of material that was stored on the pad at any time, the extent of contamination would be expected to be limited to the area immediately around the concrete pad and in the swale.

The four soil sampling locations completed for this Expanded Site Inspection, shown on Figure 3 in Attachment A, follow the expected flow path of any material spilled on the pad. The samples include one sample immediately adjacent to the uncurbed north edge of the pad (SJS17-SS01), between the pad and the opening to the sub-building space, two samples in the swale beneath the building (SJS017-SS02 and -SS03), and one sample from the swale between the building and the drainage feature that enters the pond at Landfill B (SJS17-SS04).

Downgradient surface water and sediment samples were not collected for the SI due to the RI sampling activities associated with Landfill B (Site 2) located adjacent to Site 17.

Surface Soil Sampling and Analysis

Soil sampling was conducted on 14 February 2001. Surface soil samples were collected from a depth of 0 to 6 inches using stainless steel trowels and a mixing bowl. All samples were analyzed for Target Compound List (TCL) VOCs, TCL Pesticides, PCBs, and TAL metals and cyanide according to CLP methods. Soil samples were also analyzed for TCL SVOCs by EPA SW-846 method 8270C and low concentration (LC) PAHs by EPA SW-846 method 8270M (modified for low detection limits). VOC samples were transferred directly from the surface to the sample containers, the rest were thoroughly homogenized in a stainless steel mixing bowl prior to collection into sample containers.

Additional volume of all samples were collected for lithologic descriptions which were recorded in soil boring log sheets (Attachment D). Soils were classified according to the Unified Soil Classification System (USCS). Descriptions included color, grain size, hardness, density, USCS group symbol, moisture content, and any other observations.

After the completion of sampling activities, the positions of the two samples located outside of Building 278/279 and the corners of the building were surveyed using a PRO XRS GPS unit. The distances of each of the two samples located underneath the building from two adjacent walls of the building were measured using a standard tape measure.

Analytical Results and Risk Characterization

Summary tables of constituents detected in soil samples are provided in Tables 1 and 2 of Attachment E. All detected compounds were screened against human health and ecological values for risk characterization.

The human health screening was a semi-quantitative assessment done by comparing all detected compounds against Region III risk-based screening values. The latest version of EPA Region III's Risk Based Concentration (RBC) table, dated May 2001, was used. To be consistent with EPA Region III guidance, RBCs that are based on noncarcinogenic effects were divided by 10 to account for the potential for exposure to multiple contaminants.

The ecological screening compared detected compounds against screening values to identify contaminants of potential concern. Ecological screening values were selected to be consistent with those used at Site 2, adjacent to Site 17, and at the other sites on the St. Juliens Creek Annex. These values were identified based on a review of existing USEPA Region III BTAG Screening Values and other applicable screening values in the scientific literature. References for the ecological screening criteria used are provided in Tables 3 and 6 of Attachment E.

All detected compounds were also compared to the appropriate background soil samples to be presented in the Draft SJCA Background Investigation (in progress, to be submitted June 2001). Surface soil samples were compared to the sitewide soil association map and the field soil samples were compared to the appropriate description to confirm the proper classification of the soil type. Site 17 has two soil types associations, Bohicket and Munden-Tetotum Association. The Bohicket is described a very poorly drained soil of tidal marshes that has a silty clay substratum. Soil samples SS02, SS03, and SS04 are from this soil type. The Munden-Tetotum Association is described as moderately well drained soils that have subsoils of sandy loam or clayey loam. Soil sample SS01 is from this soil type. The detected compounds were compared to the 95%upper tolerance limit for their soil type.

TCL Volatile Organics Compounds (VOCs)

Acetone and methylene chloride were detected in all of the soil samples and one trip blank (Table 1). Both acetone and methylene chloride are common lab contaminants. All detected concentrations were lower than the RBC screening values. Acetone and methylene chloride are considered artifacts of the analytical process and are not considered a contaminant of potential concern (COPC) at Site 17.

TCL Semivolatile Organic Compounds (SVOCs)

Three phthalates were detected in the soil samples, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and di-n-butylphthalate (Table 1). All of these compounds were detected in concentrations lower than the RBC and ecological screening values (Tables 3 and 4). No background values were available for comparison. Phthalates are currently not considered as COPCs for Site 17, since they are below screening values and are also common laboratory contaminants.

Polynuclear Aromatic Hydrocarbons (PAHs)

Nineteen polynuclear aromatic hydrocarbons (PAHs) were detected in the four surface soil samples (Table 1). The detected compounds included 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene. Only five compounds (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene,) exceeded the RBC values and the background values (Table 2) (Figure 4). Soil samples SS03 and SS04 contained the highest concentrations of these compounds.

Twelve compounds exceeded the BTAG screening values and the background concentrations: acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene (Table 3) (Figure 5).

Five compounds exceeded the RBC, BTAG, and background concentrations at Site 17 (Figure 4). These compounds (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene) may have been transported to the site from surface water runoff from a nearby parking lot. Generally speaking, these compounds were detected in highest concentrations in samples SS03 and SS04. This may be explained by the fact that these two samples contained a greater percentage of fine-grained material (silt), PAHs tend to adsorb to more to silt and clay than to sand. The railroad ties identified beneath the building are in close proximity to two of the sample locations, SS02 and SS03. Degradation and by-products from the railroad ties as well as from asphalt surrounding the north and east sides of the structure may be anthropogenic sources for the detection of these PAHs.

Pesticides/PCBs

Eight pesticides were detected in one or more soil samples (Table 1). These compounds included 4,4-DDD, 4,4-DDE, 4,4-DDT, alpha-chlordane, endosulfan II, endrin, endrin aldehyde, and gamma-chlordane. One PCB, Aroclor-1260, was detected in three soil samples, with the highest concentration, 2700 C ug/kg ("C" indicates the concentration was confirmed by GC/MS) found at sample SS03. None of the pesticide compounds exceeded both RBC screening values and background concentrations (Table 2). The PCB concentration at SS03 exceeded the residential RBC; no background data are available for PCBs.

Three compounds (4,4-DDD, 4,4-DDE, and 4,4-DDT) exceeded the BTAG screening values and background concentrations (Table 4), and Aroclor 1260 exceeded the BTAG screening value. Pesticides are not considered COPCs because they did not exceed RBC concentrations. Aroclor-1260 is considered a COPC.

Metals

Twenty-two metals were detected in one or more soil samples (Table 4). Eight of these inorganic compounds (antimony, arsenic, copper, iron, lead, manganese, nickel, and vanadium) also exceeded human health screening values and background concentrations (Table 5) (Figure 6). The highest concentrations for most of these metals are found in samples SS03 and SS04. The highest concentration of lead, was detected at 3,130 mg/kg in sample SS04, exceeding the industrial RBC. Arsenic was found in highest concentrations (8.7 mg/kg) in sample SS01.

Seven detected metals (chromium, iron, lead, mercury, nickel, vanadium, and zinc) exceeded BTAG screening values and background concentrations (Table 6) (Figure 7). The four compounds exceeding RBC, BTAG, and background concentrations (iron, lead, nickel, and vanadium) would be included in the primary COPCs at Site 17. Generally, the concentrations of these four metals are an order of magnitude greater in sample SS04 than in SS01 and SS02.

Summary

The surface soil sampling at Site 17 has shown that organic and inorganic compounds exist in concentrations higher than background at the site. Five semi volatile organic compounds (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene) and four inorganic compounds concentrations (iron, lead, nickel, and vanadium) were detected in concentrations exceeding background concentrations, human health, and/or ecological screening values (Table 7). Based upon initial screening efforts, Site 17 may present a risk to human health and the environment. It is recommended that additional investigation be conducted at Site 17 to determine the vertical and horizontal extent of the constituents identified and better quantify any potential risk. Consideration should be given to incorporating investigation activities of Site 17 with Site 2, based upon their proximity to one another.

Attachment A

Figures

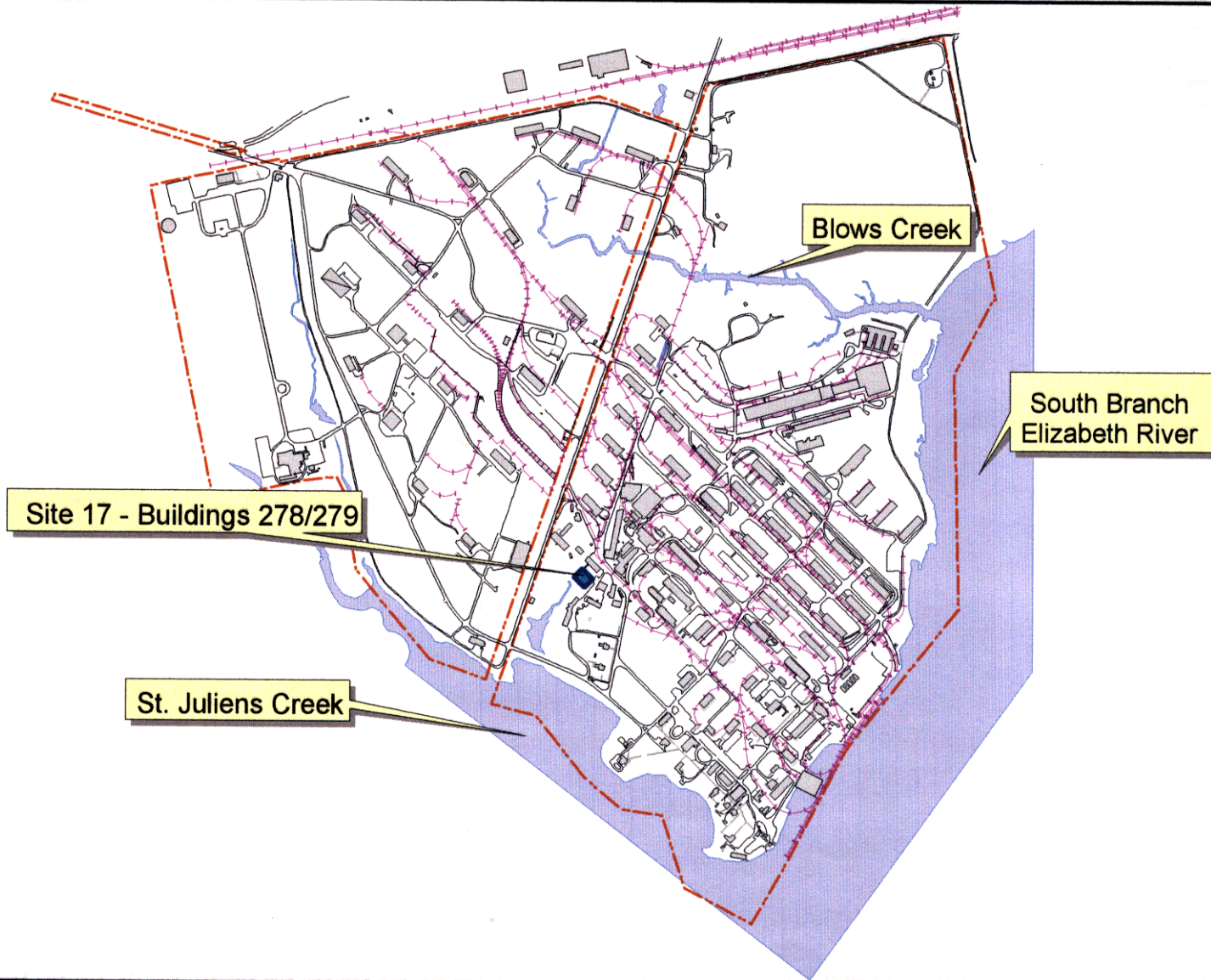


0 1000 2000 Feet





Figure 1
Site Location Map
St. Juliens Creek Annex
Chesapeake, Virginia

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LEGEND

-  Road
-  Railroad
-  Hydrography
-  Buildings

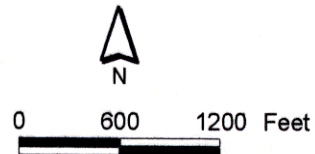
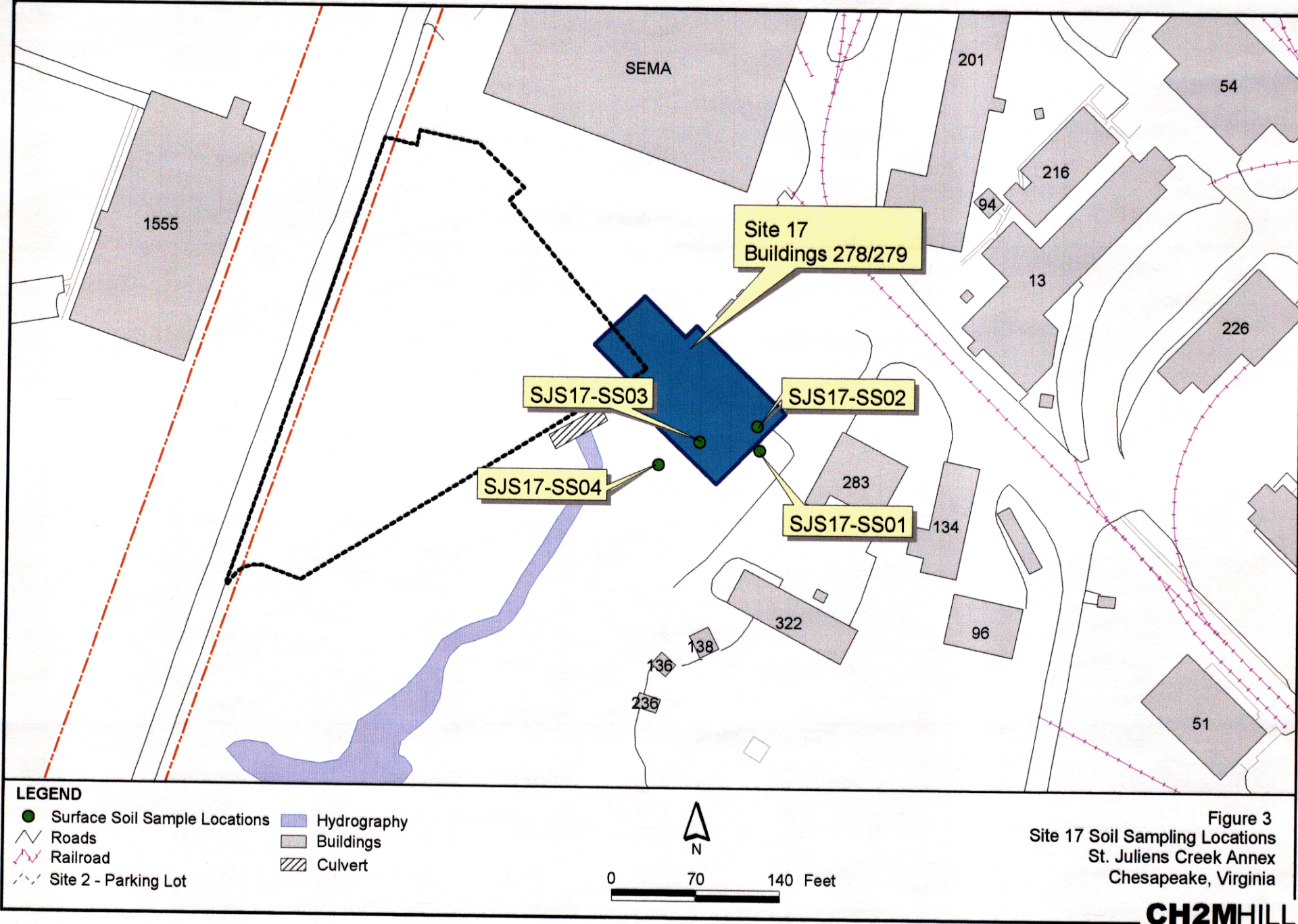
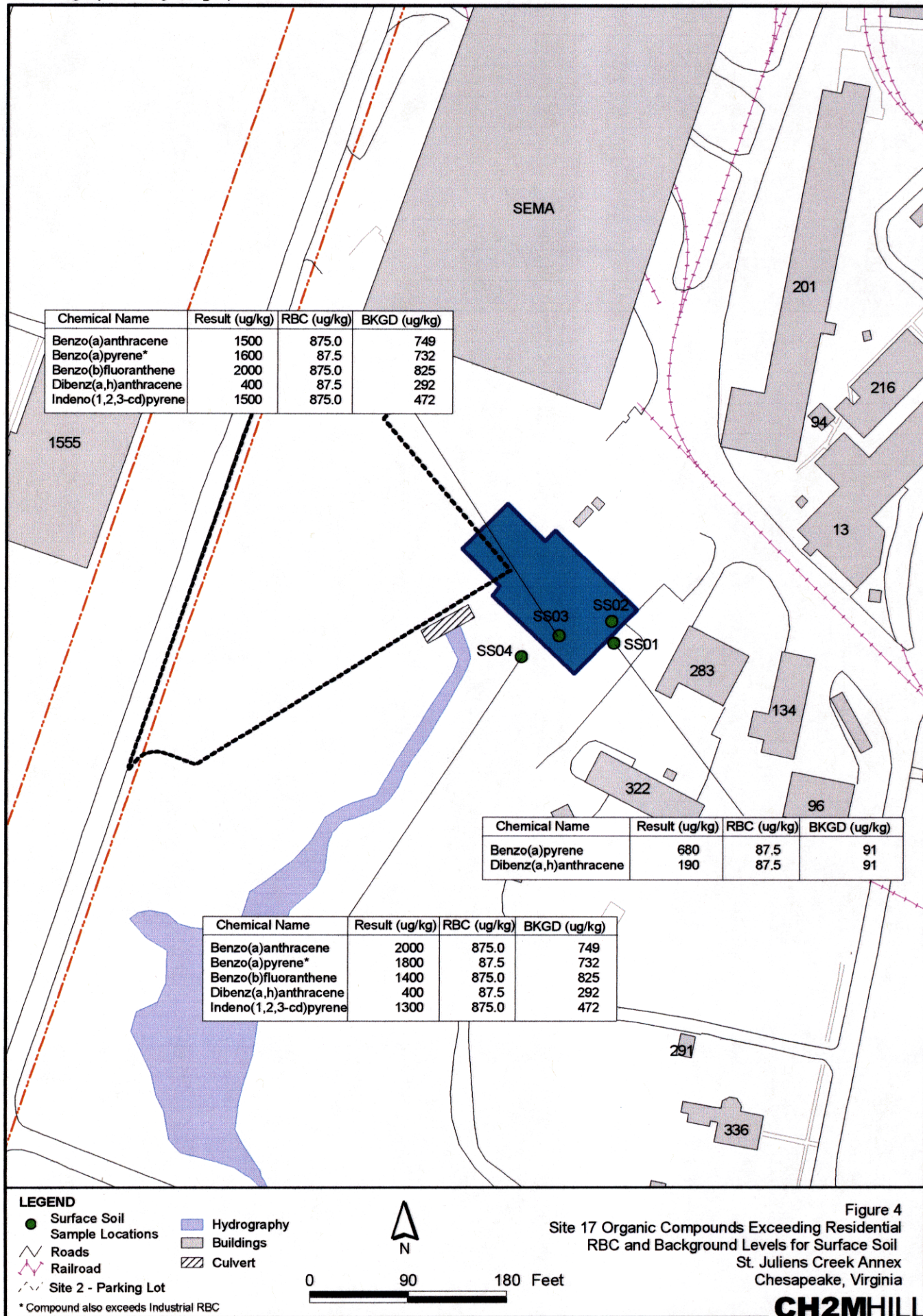
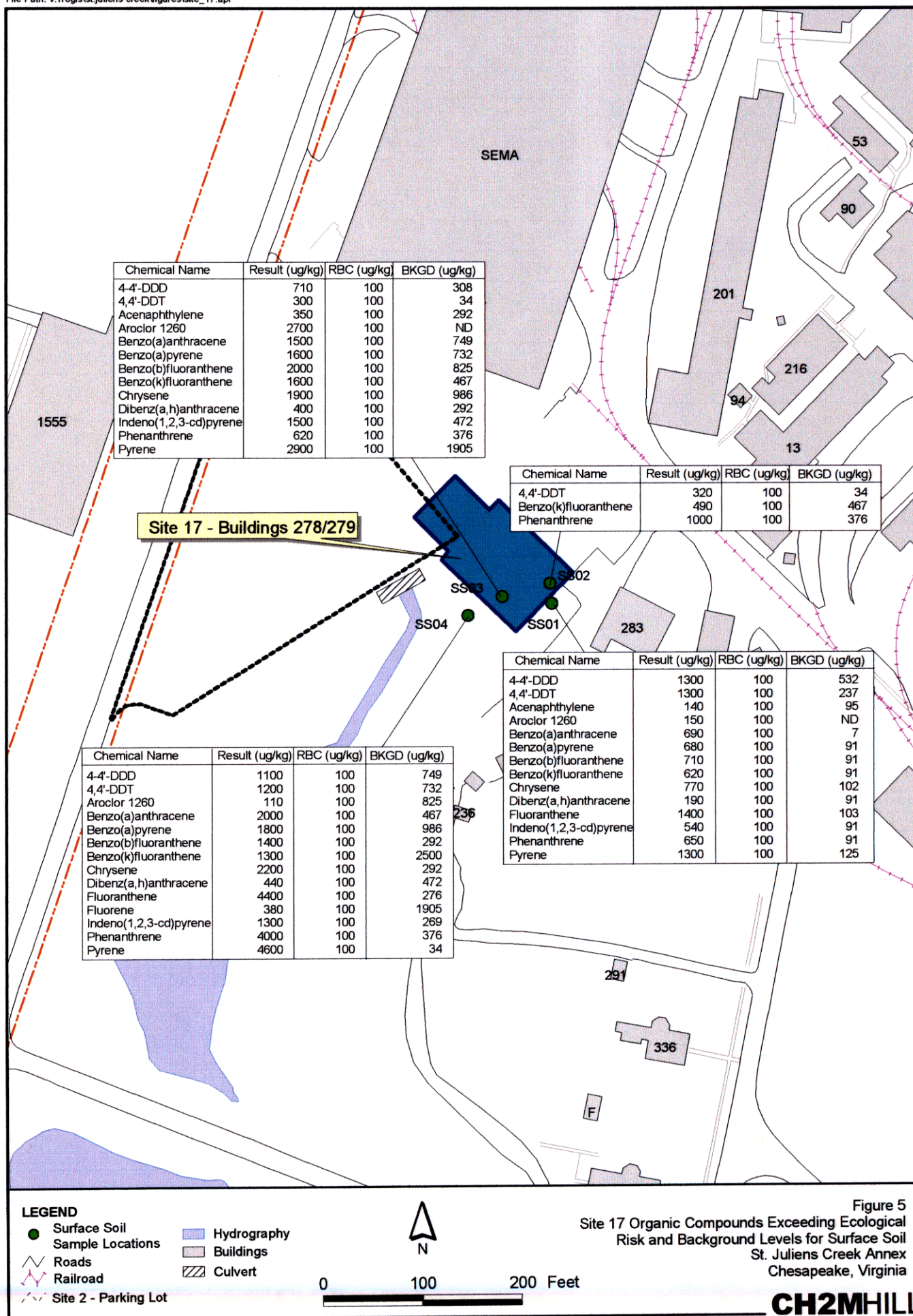
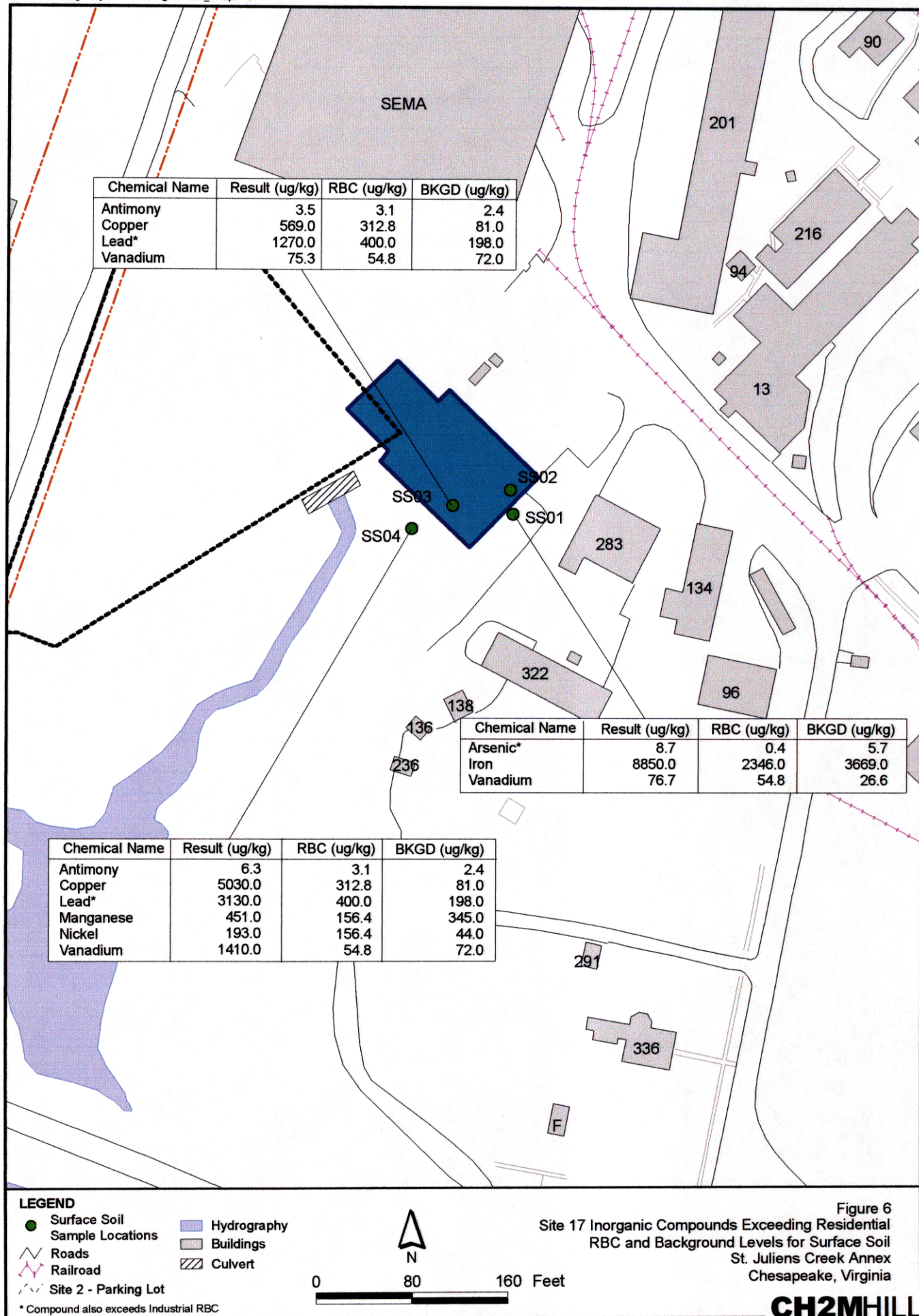


Figure 2
Location of Site 17
St. Juliens Creek Annex
Chesapeake, Virginia

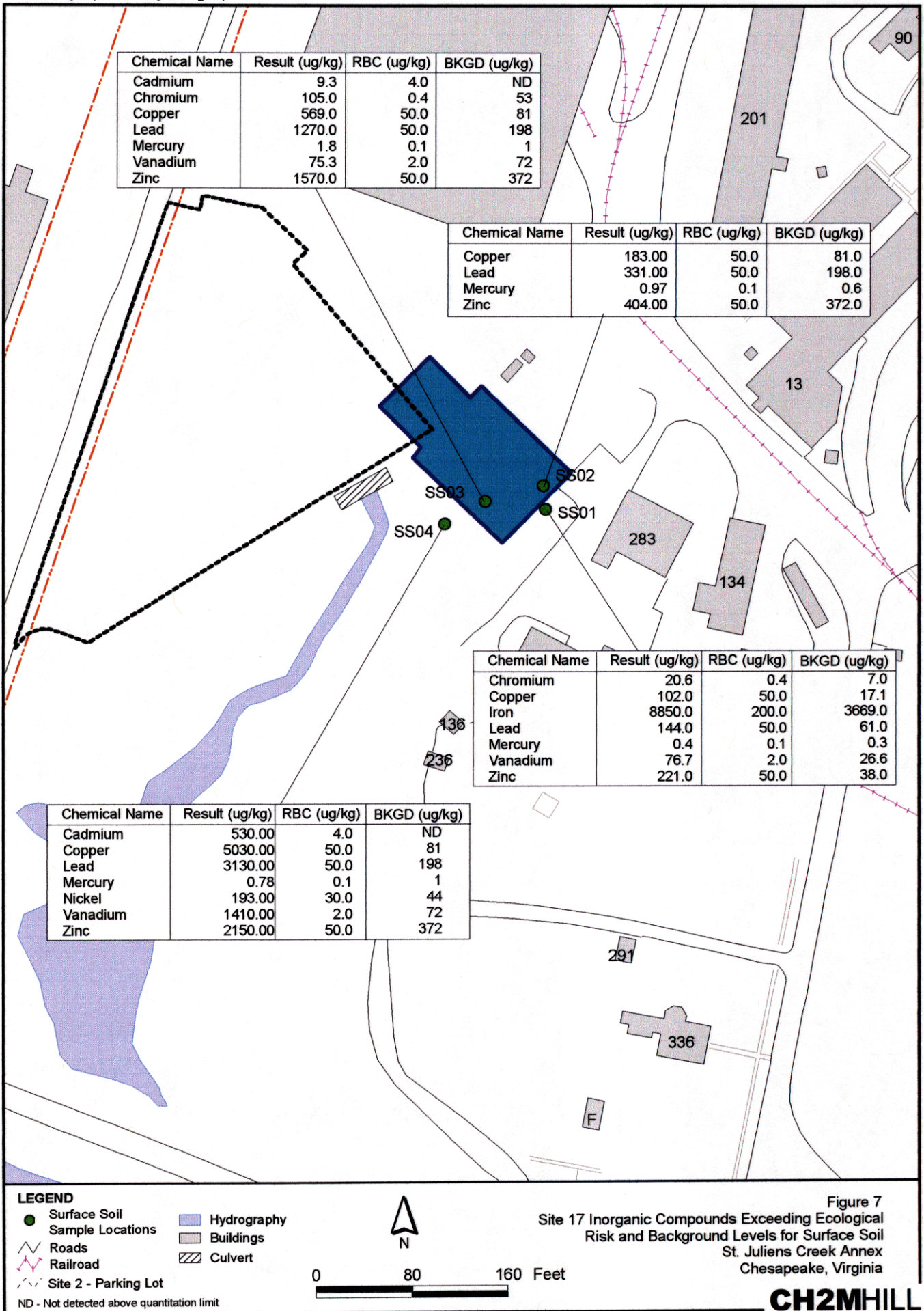








* Compound also exceeds Industrial RBC



Attachment B
1996 Relative Risk Ranking Tables

Table 4-24
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Soil Analytical Results

	UNITS	SJC17SS01	SJC17SS01DL
			DILUTION
INORGANICS			
ALUMINUM	MG/KG	2910	—
ANTIMONY	MG/KG	8.4 U	—
ARSENIC	MG/KG	2.4	—
BARIUM	MG/KG	58.1	—
BERYLLIUM	MG/KG	.23 B	—
CADMIUM	MG/KG	7.3	—
CALCIUM	MG/KG	2340	—
CHROMIUM	MG/KG	29.9	—
COBALT	MG/KG	2.9 B	—
COPPER	MG/KG	72.3	—
CYANIDE	MG/KG	.55 U	—
IRON	MG/KG	10000	—
LEAD	MG/KG	211	—
MAGNESIUM	MG/KG	962	—
MANGANESE	MG/KG	138	—
MERCURY	MG/KG	.11	—
NICKEL	MG/KG	27.4	—
POTASSIUM	MG/KG	852 B	—
SELENIUM	MG/KG	.73 U	—
SILVER	MG/KG	.92 U	—
SODIUM	MG/KG	57.1 B	—
THALLIUM	MG/KG	.73 U	—
VANADIUM	MG/KG	103	—
ZINC	MG/KG	272	—
PESTICIDES/PCBs			
4,4'-DDD	UG/KG	81 P	84 PD
4,4'-DDE	UG/KG	180 P	210 D
4,4'-DDT	UG/KG	240 P	290 PD
ALDRIN	UG/KG	1.9 U	19 U
ALPHA-BHC	UG/KG	1.9 U	19 U
ALPHA-CHLORDANE	UG/KG	4.1 P	19 U
AROCLOR-1016	UG/KG	37 U	370 U
AROCLOR-1221	UG/KG	73 U	730 U
AROCLOR-1232	UG/KG	37 U	370 U
AROCLOR-1242	UG/KG	37 U	370 U
AROCLOR-1248	UG/KG	37 U	370 U
AROCLOR-1254	UG/KG	420 P	580 PD
AROCLOR-1260	UG/KG	37 U	370 U
BETA-BHC	UG/KG	1.9 U	19 U
DELTA-BHC	UG/KG	1.9 U	19 U
DIELDRIN	UG/KG	27	37 U
ENDOSULFAN I	UG/KG	1.9 U	19 U
ENDOSULFAN II	UG/KG	3.7 U	37 U
ENDOSULFAN SULFATE	UG/KG	3.7 U	37 U
ENDRIN	UG/KG	3.7 U	36 JPD

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-24
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Soil Analytical Results

	UNITS	SJC17SS01	SJC17SS01DL
			DILUTION
ENDRIN ALDEHYDE	UG/KG	3.7 U	37 U
ENDRIN KETONE	UG/KG	3.7 U	37 U
GAMMA-BHC	UG/KG	1.9 U	19 U
GAMMA-CHLORDANE	UG/KG	4.7 P	19 U
HEPTACHLOR	UG/KG	1.9 U	19 U
HEPTACHLOR EPOXIDE	UG/KG	1.9 U	19 U
METHOXYCHLOR	UG/KG	19 U	190 U
TOXAPHENE	UG/KG	190 U	1900 U
SEMIVOLATILE ORGANICS			
1,2,4-TRICHLOROBENZENE	UG/KG	3700 U	—
1,2-DICHLOROBENZENE	UG/KG	3700 U	—
1,3-DICHLOROBENZENE	UG/KG	3700 U	—
1,4-DICHLOROBENZENE	UG/KG	3700 U	—
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/KG	3700 U	—
2,4,5-TRICHLOROPHENOL	UG/KG	8900 U	—
2,4,6-TRICHLOROPHENOL	UG/KG	3700 U	—
2,4-DICHLOROPHENOL	UG/KG	3700 U	—
2,4-DIMETHYLPHENOL	UG/KG	3700 U	—
2,4-DINITROPHENOL	UG/KG	8900 U	—
2,4-DINITROTOLUENE	UG/KG	3700 U	—
2,6-DINITROTOLUENE	UG/KG	3700 U	—
2-CHLORONAPHTHALENE	UG/KG	3700 U	—
2-CHLOROPHENOL	UG/KG	3700 U	—
2-METHYLNAPHTHALENE	UG/KG	3700 U	—
2-METHYLPHENOL	UG/KG	3700 U	—
2-NITROANILINE	UG/KG	8900 U	—
2-NITROPHENOL	UG/KG	3700 U	—
3,3'-DICHLOROBENZIDINE	UG/KG	3700 U	—
3-NITROANILINE	UG/KG	8900 U	—
4,6-DINITRO-2-METHYLPHENOL	UG/KG	8900 U	—
4-BROMOPHENOL-PHENYLETHER	UG/KG	3700 U	—
4-CHLORO-3-METHYLPHENOL	UG/KG	3700 U	—
4-CHLOROANILINE	UG/KG	3700 U	—
4-CHLOROPHENYL-PHENYLETHER	UG/KG	3700 U	—
4-METHYLPHENOL	UG/KG	3700 U	—
4-NITROANILINE	UG/KG	8900 U	—
4-NITROPHENOL	UG/KG	8900 U	—
ACENAPHTHENE	UG/KG	3700 U	—
ACENAPHTHYLENE	UG/KG	3700 U	—
ANTHRACENE	UG/KG	3700 U	—
BENZO(A)ANTHRACENE	UG/KG	520 J	—
BENZO(A)PYRENE	UG/KG	470 J	—
BENZO(B)FLUORANTHENE	UG/KG	740 J	—
BENZO(G,H,I)PERYLENE	UG/KG	3700 U	—
BENZO(K)FLUORANTHENE	UG/KG	3700 U	—
BIS(2-CHLOROETHOXY)METHANE	UG/KG	3700 U	—

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-24
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Soil Analytical Results

	UNITS	SJC17SS01	SJC17SS01DL
			DILUTION
BIS(2-CHLOROETHYL)ETHER	UG/KG	3700 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	620 J	--
BUTYLBENZYLPHTHALATE	UG/KG	3700 U	--
CARBAZOLE	UG/KG	3700 U	--
CHRYSENE	UG/KG	430 J	--
DI-N-BUTYLPHTHALATE	UG/KG	3700 U	--
DI-N-OCTYL PHTHALATE	UG/KG	3700 U	--
DIBENZO(A,H)ANTHRACENE	UG/KG	3700 U	--
DIBENZOFURAN	UG/KG	3700 U	--
DIETHYLPHTHALATE	UG/KG	3700 U	--
DIMETHYL PHTHALATE	UG/KG	3700 U	--
FLUORANTHENE	UG/KG	1200 J	--
FLUORENE	UG/KG	3700 U	--
HEXACHLOROBENZENE	UG/KG	3700 U	--
HEXACHLOROBUTADIENE	UG/KG	3700 U	--
HEXACHLOROCYCLOPENTADIENE	UG/KG	3700 U	--
HEXACHLOROETHANE	UG/KG	3700 U	--
INDENO(1,2,3-CD)PYRENE	UG/KG	3700 U	--
ISOPHORONE	UG/KG	3700 U	--
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	3700 U	--
N-NITROSODIPHENYLAMINE	UG/KG	3700 U	--
NAPHTHALENE	UG/KG	3700 U	--
NITROBENZENE	UG/KG	3700 U	--
PENTACHLOROPHENOL	UG/KG	8900 U	--
PHENANTHRENE	UG/KG	430 J	--
PHENOL	UG/KG	3700 U	--
PYRENE	UG/KG	710 J	--
VOLATILE ORGANICS			
1,1,1-TRICHLOROETHANE	UG/KG	11 U	--
1,1,2,2-TETRACHLOROETHANE	UG/KG	11 U	--
1,1,2-TRICHLOROETHANE	UG/KG	11 U	--
1,1-DICHLOROETHANE	UG/KG	11 U	--
1,1-DICHLOROETHENE	UG/KG	11 U	--
1,2-DICHLOROETHANE	UG/KG	11 U	--
1,2-DICHLOROETHENE (TOTAL)	UG/KG	11 U	--
1,2-DICHLOROPROPANE	UG/KG	11 U	--
2-BUTANONE	UG/KG	11 U	--
2-HEXANONE	UG/KG	11 U	--
4-METHYL-2-PENTANONE	UG/KG	11 U	--
ACETONE	UG/KG	5 BJ	--
BENZENE	UG/KG	11 U	--
BROMODICHLOROMETHANE	UG/KG	11 U	--
BROMOFORM	UG/KG	11 U	--
BROMOMETHANE	UG/KG	11 U	--
CARBON DISULFIDE	UG/KG	11 U	--
CARBON TETRACHLORIDE	UG/KG	11 U	--

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-24
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Soil Analytical Results

	UNITS	SJC17SS01	SJC17SS01DL
			DILUTION
CHLOROBENZENE	UG/KG	11 U	--
CHLOROETHANE	UG/KG	11 U	--
CHLOROFORM	UG/KG	11 U	--
CHLOROMETHANE	UG/KG	11 U	--
CIS-1,3-DICHLOROPROPENE	UG/KG	11 U	--
DIBROMOCHLOROMETHANE	UG/KG	11 U	--
ETHYLBENZENE	UG/KG	11 U	--
METHYLENE CHLORIDE	UG/KG	12 B	--
STYRENE	UG/KG	11 U	--
TETRACHLOROETHENE	UG/KG	11 U	--
TOLUENE	UG/KG	11 U	--
TOTAL XYLENES	UG/KG	11 U	--
TRANS-1,3-DICHLOROPROPENE	UG/KG	11 U	--
TRICHLOROETHENE	UG/KG	11 U	--
VINYL CHLORIDE	UG/KG	11 U	--

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-25
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Groundwater Analytical Results

	UNITS	SJC17GW01
INORGANICS		
ALUMINUM	UG/L	547
ANTIMONY	UG/L	46 U
ARSENIC	UG/L	2 U
BARIUM	UG/L	24.8 B
BERYLLIUM	UG/L	1 U
CADMIUM	UG/L	2 U
CALCIUM	UG/L	13800
CHROMIUM	UG/L	5 U
COBALT	UG/L	12.3 B
COPPER	UG/L	6.1 B
CYANIDE	UG/L	5 U
IRON	UG/L	1320
LEAD	UG/L	3.3
MAGNESIUM	UG/L	10500
MANGANESE	UG/L	2550
MERCURY	UG/L	.13 U
NICKEL	UG/L	10.6 B
POTASSIUM	UG/L	2030 B
SELENIUM	UG/L	4 U
SILVER	UG/L	5 U
SODIUM	UG/L	72800
THALLIUM	UG/L	4 U
VANADIUM	UG/L	2 U
ZINC	UG/L	23.6
PESTICIDES/PCBs		
4,4'-DDD	UG/L	.12 U
4,4'-DDE	UG/L	.12 U
4,4'-DDT	UG/L	.12 U
ALDRIN	UG/L	.062 U
ALPHA-BHC	UG/L	.062 U
ALPHA-CHLORDANE	UG/L	.062 U
AROCLOR-1016	UG/L	1.2 U
AROCLOR-1221	UG/L	2.5 U
AROCLOR-1232	UG/L	1.2 U
AROCLOR-1242	UG/L	1.2 U
AROCLOR-1248	UG/L	1.2 U
AROCLOR-1254	UG/L	1.2 U
AROCLOR-1260	UG/L	1.2 U
BETA-BHC	UG/L	.062 U
DELTA-BHC	UG/L	.062 U
DIELDRIN	UG/L	.12 U
ENDOSULFAN I	UG/L	.062 U
ENDOSULFAN II	UG/L	.12 U
ENDOSULFAN SULFATE	UG/L	.12 U
ENDRIN	UG/L	.12 U
ENDRIN ALDEHYDE	UG/L	.12 U
ENDRIN KETONE	UG/L	.12 U
GAMMA-BHC	UG/L	.062 U
GAMMA-CHLORDANE	UG/L	.062 U
HEPTACHLOR	UG/L	.062 U
HEPTACHLOR EPOXIDE	UG/L	.062 U
METHOXYCHLOR	UG/L	.62 U
TOXAPHENE	UG/L	6.2 U
SEMIVOLATILE ORGANICS		
1,2,4-TRICHLOROBENZENE	UG/L	20 U

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-25
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Groundwater Analytical Results

	UNITS	SJC17GW01
1,2-DICHLOROBENZENE	UG/L	20 U
1,3-DICHLOROBENZENE	UG/L	20 U
1,4-DICHLOROBENZENE	UG/L	20 U
2,2'-OXYBIS(1-CHLOROPROPANE)	UG/L	20 U
2,4,5-TRICHLOROPHENOL	UG/L	50 U
2,4,6-TRICHLOROPHENOL	UG/L	20 U
2,4-DICHLOROPHENOL	UG/L	20 U
2,4-DIMETHYLPHENOL	UG/L	20 U
2,4-DINITROPHENOL	UG/L	50 U
2,4-DINITROTOLUENE	UG/L	20 U
2,6-DINITROTOLUENE	UG/L	20 U
2-CHLORONAPHTHALENE	UG/L	20 U
2-CHLOROPHENOL	UG/L	20 U
2-METHYLNAPHTHALENE	UG/L	20 U
2-METHYLPHENOL	UG/L	20 U
2-NITROANILINE	UG/L	50 U
2-NITROPHENOL	UG/L	20 U
3,3'-DICHLOROBENZIDINE	UG/L	20 U
3-NITROANILINE	UG/L	50 U
4,6-DINITRO-2-METHYLPHENOL	UG/L	50 U
4-BROMOPHENOL-PHENYLETHER	UG/L	20 U
4-CHLORO-3-METHYLPHENOL	UG/L	20 U
4-CHLOROANILINE	UG/L	20 U
4-CHLOROPHENYL-PHENYLETHER	UG/L	20 U
4-METHYLPHENOL	UG/L	20 U
4-NITROANILINE	UG/L	50 U
4-NITROPHENOL	UG/L	50 U
ACENAPHTHENE	UG/L	20 U
ACENAPHTHYLENE	UG/L	20 U
ANTHRACENE	UG/L	20 U
BENZO(A)ANTHRACENE	UG/L	20 U
BENZO(A)PYRENE	UG/L	20 U
BENZO(B)FLUORANTHENE	UG/L	20 U
BENZO(G,H,I)PERYLENE	UG/L	20 U
BENZO(K)FLUORANTHENE	UG/L	20 U
BIS(2-CHLOROETHOXY)METHANE	UG/L	20 U
BIS(2-CHLOROETHYL)ETHER	UG/L	20 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	20 U
BUTYLBENZYLPHTHALATE	UG/L	20 U
CARBAZOLE	UG/L	20 U
CHRYSENE	UG/L	20 U
DI-N-BUTYLPHTHALATE	UG/L	20 U
DI-N-OCTYL PHTHALATE	UG/L	20 U
DIBENZO(A,H)ANTHRACENE	UG/L	20 U
DIBENZOFURAN	UG/L	20 U
DIETHYLPHTHALATE	UG/L	20 U
DIMETHYL PHTHALATE	UG/L	20 U
FLUORANTHENE	UG/L	20 U
FLUORENE	UG/L	20 U
HEXACHLOROBENZENE	UG/L	20 U
HEXACHLOROBUTADIENE	UG/L	20 U
HEXACHLOROCYCLOPENTADIENE	UG/L	20 U
HEXACHLOROETHANE	UG/L	20 U
INDENO(1,2,3-CD)PYRENE	UG/L	20 U
ISOPHORONE	UG/L	20 U
N-NITROSO-DI-N-PROPYLAMINE	UG/L	20 U

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Table 4-25
St. Juliens Creek Annex
Site 17 - AOC-A Building 279
Groundwater Analytical Results

	UNITS	SJC17GW01
N-NITROSODIPHENYLAMINE	UG/L	20 U
NAPHTHALENE	UG/L	20 U
NITROBENZENE	UG/L	20 U
PENTACHLOROPHENOL	UG/L	50 U
PHENANTHRENE	UG/L	20 U
PHENOL	UG/L	20 U
PYRENE	UG/L	20 U
VOLATILE ORGANICS		
1,1,1-TRICHLOROETHANE	UG/L	10 U
1,1,2,2-TETRACHLOROETHANE	UG/L	10 U
1,1,2-TRICHLOROETHANE	UG/L	10 U
1,1-DICHLOROETHANE	UG/L	10 U
1,1-DICHLOROETHENE	UG/L	10 U
1,2-DICHLOROETHANE	UG/L	10 U
1,2-DICHLOROETHENE (TOTAL)	UG/L	10 U
1,2-DICHLOROPROPANE	UG/L	10 U
2-BUTANONE	UG/L	10 U
2-HEXANONE	UG/L	10 U
4-METHYL-2-PENTANONE	UG/L	10 U
ACETONE	UG/L	10 U
BENZENE	UG/L	10 U
BROMODICHLOROMETHANE	UG/L	10 U
BROMOFORM	UG/L	10 U
BROMOMETHANE	UG/L	10 U
CARBON DISULFIDE	UG/L	10 U
CARBON TETRACHLORIDE	UG/L	10 U
CHLOROBENZENE	UG/L	10 U
CHLOROETHANE	UG/L	10 U
CHLOROFORM	UG/L	10 U
CHLOROMETHANE	UG/L	10 U
CIS-1,3-DICHLOROPROPENE	UG/L	10 U
DIBROMOCHLOROMETHANE	UG/L	10 U
ETHYLBENZENE	UG/L	10 U
METHYLENE CHLORIDE	UG/L	8 BJ
STYRENE	UG/L	10 U
TETRACHLOROETHENE	UG/L	10 U
TOLUENE	UG/L	10 U
TOTAL XYLENES	UG/L	10 U
TRANS-1,3-DICHLOROPROPENE	UG/L	10 U
TRICHLOROETHENE	UG/L	10 U
VINYL CHLORIDE	UG/L	10 U

U = Not Detected

B = Compound also detected in blank

J = Estimated Value

P = Concentration showed greater than 25% difference between columns; the lower of the 2 values is reported

E = Concentration exceeds calibration range

Attachment C
Site Photos



Photo 1. East side of Building 278/279 showing location of concrete pad.



Photo 2. View of East side of building. Runoff entrance to the left and railroad ties to the right along foundation. Flag represents location of surface soil sample, SS02.



Photo 3. View beneath building looking southwest. Access to underside of building in background. Surface sample location SS02 and drainage feature visible in foreground.

Attachment D
Soil Boring Logs

CDM Federal Programs Corporation

Boring Number: 517

Sheet: 1 of 1

St. Juliens Creek Annex, Portsmouth, VA

Soil Boring Log

Project: Site Screening Assessments

Location: AOC 5501

Start / Finish:

Drilling Contractor: Columbia Technologies

Drilling Method and Equipment: Geoprobe Direct Push

Logger: Bob Hunt

Depth Below Surface (FT)	Sample			Soil Description	Comments
	Interval	Type and Number	Recovery (FT)	Soil Name, USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency, Soil Structure, Mineralogy	Health and Safety Comments, and Instrument (OVM) Readings
6"	0-6"	5501		Black (2.5y 2.5/1) SPT, with fine sand, with organics, very loose, moist (Topsoil)	

CDM Federal Programs Corporation

Boring Number: 517

Sheet: 1 of 1

St. Juliens Creek Annex, Portsmouth, VA

Soil Boring Log 5502

Project: Site Screening Assessments

Location: AOC

Start / Finish:

Drilling Contractor: Columbia Technologies

Drilling Method and Equipment: Geoprobe Direct Push

Logger: Bob Hunt

Depth Below Surface (FT)	Sample			Soil Description	Comments
	Interval	Type and Number	Recovery (FT)	Soil Name, USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency, Soil Structure, Mineralogy	Health and Safety Comments, and Instrument (OVM) Readings
6'	0-6'	5502		Dark Olive Brown (2.5Y 2/3) Silty SAND loose, moist. Silty SAND (SM)	

CDM Federal Programs Corporation

Boring Number: S 17

Sheet: 1 of 1

St. Juliens Creek Annex, Portsmouth, VA

Soil Boring Log

Project: Site Screening Assessments

Location: AOC SS03

Start / Finish:

Drilling Contractor: Columbia Technologies

Drilling Method and Equipment: Geoprobe Direct Push

Logger: Bob Hunt

Depth Below Surface (FT)	Sample			Soil Description	Comments
	Interval	Type and Number	Recovery (FT)	Soil Name, USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency, Soil Structure, Mineralogy	Health and Safety Comments, and Instrument (OVM) Readings
6"	06"	SS03		Dark Olive Brown (2.5y 3/3) silty fine sand, trace clay, trace shell fragments, loose, wet. (silty sand (SM))	

CDM Federal Programs Corporation

Boring Number: S 17

Sheet: of

St. Juliens Creek Annex, Portsmouth, VA

Soil Boring Log

Project: Site Screening Assessments

Location: AOC 5504

Start / Finish:

Drilling Contractor: Columbia Technologies

Drilling Method and Equipment: Geoprobe Direct Push

Logger: Bob Hunt

Depth Below Surface (FT)	Sample			Soil Description	Comments
	Interval	Type and Number	Recovery (FT)	Soil Name, USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency, Soil Structure, Mineralogy	Health and Safety Comments, and Instrument (OVM) Readings
6"	0-6"	SS04		Black (2.5Y 2.5/1) Sandy SILT, with organics, trace clay, loose, moist. (Topsoil)	

Attachment E
2001 Soil Sampling Results

Table 1
SJC Site 17 Soil Samples - Organic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
VOLATILE ORGANIC COMPOUNDS					
SJS17-SS01-000	Acetone	7	B	ug/kg	12
SJS17-SS02-000	Acetone	5.5	B	ug/kg	13
SJS17-SS02-000P	Acetone	6.8	B	ug/kg	13
SJS17-SS03-000	Acetone	8	B	ug/kg	14
SJS17-SS04-000	Acetone	7.9	B	ug/kg	15
TB-140201	Acetone	4.6	B	ug/L	10
SJS17-SS01-000	Methylene chloride	1.6	J	ug/kg	12
SJS17-SS02-000	Methylene chloride	2.8	J	ug/kg	13
SJS17-SS02-000P	Methylene chloride	3.9	B	ug/kg	13
SJS17-SS03-000	Methylene chloride	3.6	B	ug/kg	14
SJS17-SS04-000	Methylene chloride	3.3	B	ug/kg	15
SEMIVOLATILE ORGANIC COMPOUNDS/PESTICIDES/PCBS/PAHS					
SJS17-SS02-000	2-Methylnaphthalene	35	J	ug/kg	440
SJS17-SS02-000P	2-Methylnaphthalene	35	J	ug/kg	420
SJS17-SS03-000	2-Methylnaphthalene	37	J	ug/kg	460
SJS17-SS04-000	2-Methylnaphthalene	210	J	ug/kg	510
SJS17-SS01-000	4,4'-DDD	61	J	ug/kg	12
SJS17-SS02-000	4,4'-DDD	120		ug/kg	4.4
SJS17-SS02-000P	4,4'-DDD	110		ug/kg	4.2
SJS17-SS03-000	4,4'-DDD	710		ug/kg	23
SJS17-SS04-000R2	4,4'-DDD	140		ug/kg	10
SJS17-SS01-000	4,4'-DDE	1300		ug/kg	12
SJS17-SS02-000	4,4'-DDE	160		ug/kg	4.4
SJS17-SS02-000P	4,4'-DDE	86		ug/kg	4.2
SJS17-SS03-000	4,4'-DDE	210		ug/kg	23
SJS17-SS04-000R2	4,4'-DDE	1100		ug/kg	10
SJS17-SS01-000	4,4'-DDT	1300		ug/kg	12
SJS17-SS02-000	4,4'-DDT	320		ug/kg	4.4
SJS17-SS02-000P	4,4'-DDT	180		ug/kg	4.2
SJS17-SS03-000	4,4'-DDT	300		ug/kg	23
SJS17-SS04-000R2	4,4'-DDT	1200		ug/kg	10
SJS17-SS01-000	Acenaphthene	63	J	ug/kg	80
SJS17-SS01-000	Acenaphthene	63	J	ug/kg	400
SJS17-SS02-000	Acenaphthene	17	J	ug/kg	88
SJS17-SS02-000P	Acenaphthene	71	J	ug/kg	84
SJS17-SS02-000P	Acenaphthene	85	J	ug/kg	420
SJS17-SS03-000	Acenaphthene	59	J	ug/kg	93
SJS17-SS03-000	Acenaphthene	64	J	ug/kg	460
SJS17-SS04-000	Acenaphthene	370		ug/kg	100
SJS17-SS04-000	Acenaphthene	440	J	ug/kg	510
SJS17-SS01-000	Acenaphthylene	140		ug/kg	80
SJS17-SS01-000	Acenaphthylene	220	J	ug/kg	400
SJS17-SS02-000	Acenaphthylene	120		ug/kg	88
SJS17-SS02-000	Acenaphthylene	230	J	ug/kg	440
SJS17-SS02-000P	Acenaphthylene	67	J	ug/kg	84
SJS17-SS02-000P	Acenaphthylene	110	J	ug/kg	420
SJS17-SS03-000	Acenaphthylene	350		ug/kg	93
SJS17-SS03-000	Acenaphthylene	600		ug/kg	460
SJS17-SS04-000	Acenaphthylene	110		ug/kg	100
SJS17-SS04-000	Acenaphthylene	200	J	ug/kg	510

Table 1
SJC Site 17 Soil Samples - Organic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS02-000P	alpha-Chlordane	1.1	J	ug/kg	2.1
SJS17-SS01-000	Anthracene	160		ug/kg	80
SJS17-SS01-000	Anthracene	190	J	ug/kg	400
SJS17-SS02-000	Anthracene	98		ug/kg	88
SJS17-SS02-000	Anthracene	140	J	ug/kg	440
SJS17-SS02-000P	Anthracene	190		ug/kg	84
SJS17-SS02-000P	Anthracene	210	J	ug/kg	420
SJS17-SS03-000	Anthracene	320		ug/kg	93
SJS17-SS03-000	Anthracene	440	J	ug/kg	460
SJS17-SS04-000	Anthracene	710		ug/kg	100
SJS17-SS04-000	Anthracene	790		ug/kg	510
SJS17-SS01-000	Aroclor-1260	150		ug/kg	120
SJS17-SS03-000	Aroclor-1260	2700	C	ug/kg	230
SJS17-SS04-000R2	Aroclor-1260	110		ug/kg	100
SJS17-SS01-000	Benzo(a)anthracene	690		ug/kg	80
SJS17-SS01-000	Benzo(a)anthracene	610		ug/kg	400
SJS17-SS02-000	Benzo(a)anthracene	620		ug/kg	88
SJS17-SS02-000	Benzo(a)anthracene	630		ug/kg	440
SJS17-SS02-000P	Benzo(a)anthracene	720		ug/kg	84
SJS17-SS02-000P	Benzo(a)anthracene	720		ug/kg	420
SJS17-SS03-000	Benzo(a)anthracene	1500		ug/kg	93
SJS17-SS03-000	Benzo(a)anthracene	1300	J	ug/kg	460
SJS17-SS04-000	Benzo(a)anthracene	2000	L	ug/kg	100
SJS17-SS04-000	Benzo(a)anthracene	2000		ug/kg	510
SJS17-SS01-000	Benzo(a)pyrene	680		ug/kg	80
SJS17-SS01-000	Benzo(a)pyrene	590	J	ug/kg	400
SJS17-SS02-000	Benzo(a)pyrene	600		ug/kg	88
SJS17-SS02-000	Benzo(a)pyrene	620	J	ug/kg	440
SJS17-SS02-000P	Benzo(a)pyrene	640		ug/kg	84
SJS17-SS02-000P	Benzo(a)pyrene	650	J	ug/kg	420
SJS17-SS03-000	Benzo(a)pyrene	1600		ug/kg	93
SJS17-SS03-000	Benzo(a)pyrene	1400	J	ug/kg	460
SJS17-SS04-000	Benzo(a)pyrene	1800		ug/kg	100
SJS17-SS04-000	Benzo(a)pyrene	2100		ug/kg	510
SJS17-SS01-000	Benzo(b)fluoranthene	710		ug/kg	80
SJS17-SS01-000	Benzo(b)fluoranthene	680	J	ug/kg	400
SJS17-SS02-000	Benzo(b)fluoranthene	590		ug/kg	88
SJS17-SS02-000	Benzo(b)fluoranthene	650	J	ug/kg	440
SJS17-SS02-000P	Benzo(b)fluoranthene	550		ug/kg	84
SJS17-SS02-000P	Benzo(b)fluoranthene	630	J	ug/kg	420
SJS17-SS03-000	Benzo(b)fluoranthene	2000		ug/kg	93
SJS17-SS04-000	Benzo(b)fluoranthene	1400		ug/kg	100
SJS17-SS01-000	Benzo(g,h,i)perylene	650		ug/kg	80
SJS17-SS02-000	Benzo(g,h,i)perylene	530		ug/kg	88
SJS17-SS02-000	Benzo(g,h,i)perylene	210	J	ug/kg	440
SJS17-SS02-000P	Benzo(g,h,i)perylene	590		ug/kg	84
SJS17-SS02-000P	Benzo(g,h,i)perylene	220	J	ug/kg	420
SJS17-SS03-000	Benzo(g,h,i)perylene	1600		ug/kg	93
SJS17-SS03-000	Benzo(g,h,i)perylene	240	J	ug/kg	460
SJS17-SS04-000	Benzo(g,h,i)perylene	1500		ug/kg	100
SJS17-SS04-000	Benzo(g,h,i)perylene	400	J	ug/kg	510

Table 1
SJC Site 17 Soil Samples - Organic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS01-000	Benzo(k)fluoranthene	620		ug/kg	80
SJS17-SS01-000	Benzo(k)fluoranthene	620	J	ug/kg	400
SJS17-SS02-000	Benzo(k)fluoranthene	440		ug/kg	88
SJS17-SS02-000	Benzo(k)fluoranthene	580	J	ug/kg	440
SJS17-SS02-000P	Benzo(k)fluoranthene	490		ug/kg	84
SJS17-SS02-000P	Benzo(k)fluoranthene	580	J	ug/kg	420
SJS17-SS03-000	Benzo(k)fluoranthene	1600		ug/kg	93
SJS17-SS03-000	Benzo(k)fluoranthene	1200	J	ug/kg	460
SJS17-SS04-000	Benzo(k)fluoranthene	1300		ug/kg	100
SJS17-SS04-000	Benzo(k)fluoranthene	1600	J	ug/kg	510
SJS17-SS01-000	bis(2-Ethylhexyl)phthalate	120	J	ug/kg	400
SJS17-SS02-000	bis(2-Ethylhexyl)phthalate	42	J	ug/kg	440
SJS17-SS02-000P	bis(2-Ethylhexyl)phthalate	56	J	ug/kg	420
SJS17-SS03-000	bis(2-Ethylhexyl)phthalate	1700	J	ug/kg	460
SJS17-SS04-000	bis(2-Ethylhexyl)phthalate	55	J	ug/kg	510
SJS17-SS01-000	Butylbenzylphthalate	65	J	ug/kg	400
SJS17-SS02-000	Butylbenzylphthalate	24	J	ug/kg	440
SJS17-SS02-000P	Butylbenzylphthalate	33	J	ug/kg	420
SJS17-SS03-000	Butylbenzylphthalate	430	J	ug/kg	460
SJS17-SS01-000	Carbazole	79	J	ug/kg	400
SJS17-SS02-000	Carbazole	50	J	ug/kg	440
SJS17-SS02-000P	Carbazole	63	J	ug/kg	420
SJS17-SS03-000	Carbazole	130	J	ug/kg	460
SJS17-SS04-000	Carbazole	350	J	ug/kg	510
SJS17-SS01-000	Chrysene	770		ug/kg	80
SJS17-SS01-000	Chrysene	690		ug/kg	400
SJS17-SS02-000	Chrysene	670		ug/kg	88
SJS17-SS02-000	Chrysene	700		ug/kg	440
SJS17-SS02-000P	Chrysene	780		ug/kg	84
SJS17-SS02-000P	Chrysene	840		ug/kg	420
SJS17-SS03-000	Chrysene	1900		ug/kg	93
SJS17-SS03-000	Chrysene	1700	J	ug/kg	460
SJS17-SS04-000	Chrysene	2200		ug/kg	100
SJS17-SS04-000	Chrysene	2400	J	ug/kg	510
SJS17-SS01-000	Dibenz(a,h)anthracene	190		ug/kg	80
SJS17-SS01-000	Dibenz(a,h)anthracene	65	J	ug/kg	400
SJS17-SS02-000	Dibenz(a,h)anthracene	180		ug/kg	88
SJS17-SS02-000	Dibenz(a,h)anthracene	68	J	ug/kg	440
SJS17-SS02-000P	Dibenz(a,h)anthracene	170		ug/kg	84
SJS17-SS02-000P	Dibenz(a,h)anthracene	68	J	ug/kg	420
SJS17-SS03-000	Dibenz(a,h)anthracene	400		ug/kg	93
SJS17-SS03-000	Dibenz(a,h)anthracene	97	J	ug/kg	460
SJS17-SS04-000	Dibenz(a,h)anthracene	440		ug/kg	100
SJS17-SS04-000	Dibenz(a,h)anthracene	110	J	ug/kg	510
SJS17-SS01-000	Dibenzofuran	25	J	ug/kg	400
SJS17-SS02-000	Dibenzofuran	26	J	ug/kg	440
SJS17-SS02-000P	Dibenzofuran	33	J	ug/kg	420
SJS17-SS03-000	Dibenzofuran	44	J	ug/kg	460
SJS17-SS04-000	Dibenzofuran	220	J	ug/kg	510
SJS17-SS01-000	Di-n-butylphthalate	41	J	ug/kg	400
SJS17-SS03-000	Di-n-butylphthalate	70	J	ug/kg	460

Table 1
SJC Site 17 Soil Samples - Organic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS04-000	Di-n-butylphthalate	84	J	ug/kg	510
SJS17-SS01-000	Endosulfan II	8	J	ug/kg	12
SJS17-SS03-000	Endosulfan II	53	J	ug/kg	23
SJS17-SS04-000R2	Endosulfan II	7.9	J	ug/kg	10
SJS17-SS03-000	Endrin	24	J	ug/kg	23
SJS17-SS01-000	Endrin aldehyde	14		ug/kg	12
SJS17-SS02-000	Endrin aldehyde	2.2	J	ug/kg	4.4
SJS17-SS02-000P	Endrin aldehyde	2.2	J	ug/kg	4.2
SJS17-SS03-000	Endrin aldehyde	73	J	ug/kg	23
SJS17-SS01-000	Fluoranthene	1400		ug/kg	80
SJS17-SS01-000	Fluoranthene	1300		ug/kg	400
SJS17-SS02-000	Fluoranthene	1100		ug/kg	88
SJS17-SS02-000	Fluoranthene	1300		ug/kg	440
SJS17-SS02-000P	Fluoranthene	1500		ug/kg	84
SJS17-SS02-000P	Fluoranthene	1700		ug/kg	420
SJS17-SS03-000	Fluoranthene	2400		ug/kg	93
SJS17-SS03-000	Fluoranthene	2700		ug/kg	460
SJS17-SS04-000	Fluoranthene	4400		ug/kg	100
SJS17-SS04-000	Fluoranthene	4100		ug/kg	510
SJS17-SS01-000	Fluorene	48	J	ug/kg	80
SJS17-SS01-000	Fluorene	46	J	ug/kg	400
SJS17-SS02-000	Fluorene	21	J	ug/kg	88
SJS17-SS02-000P	Fluorene	72	J	ug/kg	84
SJS17-SS02-000P	Fluorene	62	J	ug/kg	420
SJS17-SS03-000	Fluorene	62	J	ug/kg	93
SJS17-SS03-000	Fluorene	59	J	ug/kg	460
SJS17-SS04-000	Fluorene	380	L	ug/kg	100
SJS17-SS04-000	Fluorene	430	J	ug/kg	510
SJS17-SS03-000	gamma-Chlordane	6.3	J	ug/kg	12
SJS17-SS01-000	Indeno(1,2,3-cd)pyrene	540		ug/kg	80
SJS17-SS01-000	Indeno(1,2,3-cd)pyrene	240	J	ug/kg	400
SJS17-SS02-000	Indeno(1,2,3-cd)pyrene	440		ug/kg	88
SJS17-SS02-000	Indeno(1,2,3-cd)pyrene	220	J	ug/kg	440
SJS17-SS02-000P	Indeno(1,2,3-cd)pyrene	460		ug/kg	84
SJS17-SS02-000P	Indeno(1,2,3-cd)pyrene	230	J	ug/kg	420
SJS17-SS03-000	Indeno(1,2,3-cd)pyrene	1500		ug/kg	93
SJS17-SS03-000	Indeno(1,2,3-cd)pyrene	300	J	ug/kg	460
SJS17-SS04-000	Indeno(1,2,3-cd)pyrene	1300		ug/kg	100
SJS17-SS04-000	Indeno(1,2,3-cd)pyrene	410	J	ug/kg	510
SJS17-SS01-000	Naphthalene	14	J	ug/kg	80
SJS17-SS02-000	Naphthalene	32	J	ug/kg	88
SJS17-SS02-000	Naphthalene	42	J	ug/kg	440
SJS17-SS02-000P	Naphthalene	30	J	ug/kg	84
SJS17-SS02-000P	Naphthalene	36	J	ug/kg	420
SJS17-SS03-000	Naphthalene	44	J	ug/kg	93
SJS17-SS03-000	Naphthalene	53	J	ug/kg	460
SJS17-SS04-000	Naphthalene	250		ug/kg	100
SJS17-SS04-000	Naphthalene	320	J	ug/kg	510
SJS17-SS01-000	Phenanthrene	650		ug/kg	80
SJS17-SS01-000	Phenanthrene	620		ug/kg	400
SJS17-SS02-000	Phenanthrene	340		ug/kg	88

Table 1
SJC Site 17 Soil Samples - Organic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS02-000	Phenanthrene	380	J	ug/kg	440
SJS17-SS02-000P	Phenanthrene	1000		ug/kg	84
SJS17-SS02-000P	Phenanthrene	1100		ug/kg	420
SJS17-SS03-000	Phenanthrene	620		ug/kg	93
SJS17-SS03-000	Phenanthrene	610		ug/kg	460
SJS17-SS04-000	Phenanthrene	4000		ug/kg	100
SJS17-SS04-000	Phenanthrene	4000		ug/kg	510
SJS17-SS01-000	Pyrene	1300		ug/kg	80
SJS17-SS01-000	Pyrene	810		ug/kg	400
SJS17-SS02-000	Pyrene	1200		ug/kg	88
SJS17-SS02-000	Pyrene	870		ug/kg	440
SJS17-SS02-000P	Pyrene	1700		ug/kg	84
SJS17-SS02-000P	Pyrene	1300		ug/kg	420
SJS17-SS03-000	Pyrene	2900		ug/kg	93
SJS17-SS03-000	Pyrene	1500	J	ug/kg	460
SJS17-SS04-000	Pyrene	4600		ug/kg	100
SJS17-SS04-000	Pyrene	3600	J	ug/kg	510

Notes:

B = Not detected substantially above the level reported in laboratory or field blanks.

C = Presence of pesticide confirmed by GC/MS.

J = Analyte present. Reported value may not be accurate or precise.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Table 2
SJC Site 17 Soil Samples - Inorganic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS01-000	Aluminum	6210		mg/kg	3.5
SJS17-SS02-000	Aluminum	2690		mg/kg	3.9
SJS17-SS02-000P	Aluminum	3600		mg/kg	3.7
SJS17-SS03-000	Aluminum	5320		mg/kg	4.1
SJS17-SS04-000	Aluminum	5350		mg/kg	4.5
SJS17-SS01-000	Antimony	1.1	J	mg/kg	0.48
SJS17-SS03-000	Antimony	3.5	J	mg/kg	0.56
SJS17-SS04-000	Antimony	6.3	J	mg/kg	0.62
SJS17-SS01-000	Arsenic	8.7		mg/kg	0.51
SJS17-SS02-000	Arsenic	9		mg/kg	0.56
SJS17-SS02-000P	Arsenic	7.8		mg/kg	0.53
SJS17-SS03-000	Arsenic	10.6		mg/kg	0.59
SJS17-SS04-000	Arsenic	15.5		mg/kg	0.65
SJS17-SS01-000	Barium	63.1		mg/kg	0.096
SJS17-SS02-000	Barium	116		mg/kg	0.11
SJS17-SS02-000P	Barium	54.4		mg/kg	0.1
SJS17-SS03-000	Barium	122		mg/kg	0.11
SJS17-SS04-000	Barium	404		mg/kg	0.12
SJS17-SS01-000	Beryllium	0.27	B	mg/kg	0.031
SJS17-SS02-000	Beryllium	0.2	B	mg/kg	0.034
SJS17-SS02-000P	Beryllium	0.16	B	mg/kg	0.033
SJS17-SS03-000	Beryllium	0.32	B	mg/kg	0.036
SJS17-SS01-000	Cadmium	3.7	B	mg/kg	0.63
SJS17-SS02-000	Cadmium	1.7	B	mg/kg	0.69
SJS17-SS02-000P	Cadmium	1.5	B	mg/kg	0.66
SJS17-SS03-000	Cadmium	9.3	K	mg/kg	0.73
SJS17-SS04-000	Cadmium	5.3	K	mg/kg	0.8
SJS17-SS01-000	Calcium	2460		mg/kg	4.5
SJS17-SS02-000	Calcium	4730		mg/kg	5
SJS17-SS02-000P	Calcium	2550		mg/kg	4.7
SJS17-SS03-000	Calcium	9630		mg/kg	5.2
SJS17-SS04-000	Calcium	4730		mg/kg	5.8
SJS17-SS01-000	Chromium	20.6	K	mg/kg	0.63
SJS17-SS02-000	Chromium	10.9	K	mg/kg	0.69
SJS17-SS02-000P	Chromium	11.1	K	mg/kg	0.66
SJS17-SS03-000	Chromium	105	K	mg/kg	0.73
SJS17-SS04-000	Chromium	45.4	K	mg/kg	0.8
SJS17-SS01-000	Cobalt	2.8	B	mg/kg	0.99
SJS17-SS02-000	Cobalt	2.4	B	mg/kg	1.1
SJS17-SS02-000P	Cobalt	2.7	B	mg/kg	1
SJS17-SS03-000	Cobalt	10.2	J	mg/kg	1.2
SJS17-SS04-000	Cobalt	10.2	J	mg/kg	1.3
SJS17-SS01-000	Copper	102	J	mg/kg	0.48
SJS17-SS02-000	Copper	183	J	mg/kg	0.53
SJS17-SS02-000P	Copper	96.7	J	mg/kg	0.51
SJS17-SS03-000	Copper	569	J	mg/kg	0.56
SJS17-SS04-000	Copper	5030	J	mg/kg	0.62
SJS17-SS01-000	Iron	8850	K	mg/kg	0.91
SJS17-SS02-000	Iron	8210	K	mg/kg	1
SJS17-SS02-000P	Iron	8980	K	mg/kg	0.96
SJS17-SS03-000	Iron	45200	K	mg/kg	1.1
SJS17-SS04-000	Iron	24800	K	mg/kg	1.2

Table 2
SJC Site 17 Soil Samples - Inorganic Detects

Sample ID	Chemical Name	Value	Qualifier	Units	Detection Limit
SJS17-SS01-000	Lead	144	K	mg/kg	0.36
SJS17-SS02-000	Lead	294	K	mg/kg	0.4
SJS17-SS02-000P	Lead	331	K	mg/kg	0.38
SJS17-SS03-000	Lead	1270	K	mg/kg	0.42
SJS17-SS04-000	Lead	3130	K	mg/kg	2.3
SJS17-SS01-000	Magnesium	890	J	mg/kg	5.7
SJS17-SS02-000	Magnesium	376	J	mg/kg	6.2
SJS17-SS02-000P	Magnesium	442	J	mg/kg	6
SJS17-SS03-000	Magnesium	1480		mg/kg	6.6
SJS17-SS04-000	Magnesium	1140	J	mg/kg	7.3
SJS17-SS01-000	Manganese	93.3	J	mg/kg	0.17
SJS17-SS02-000	Manganese	106	J	mg/kg	0.19
SJS17-SS02-000P	Manganese	144	J	mg/kg	0.18
SJS17-SS03-000	Manganese	307	J	mg/kg	0.2
SJS17-SS04-000	Manganese	451	J	mg/kg	0.22
SJS17-SS01-000	Mercury	0.4	L	mg/kg	0.048
SJS17-SS02-000	Mercury	0.97	L	mg/kg	0.052
SJS17-SS02-000P	Mercury	0.94	L	mg/kg	0.05
SJS17-SS03-000	Mercury	1.8	L	mg/kg	0.055
SJS17-SS04-000	Mercury	0.78	L	mg/kg	0.061
SJS17-SS01-000	Nickel	17.1	K	mg/kg	2.4
SJS17-SS02-000	Nickel	8.3	J	mg/kg	2.6
SJS17-SS02-000P	Nickel	12	K	mg/kg	2.5
SJS17-SS03-000	Nickel	40.3	K	mg/kg	2.7
SJS17-SS04-000	Nickel	193	K	mg/kg	3
SJS17-SS01-000	Potassium	542	J	mg/kg	127
SJS17-SS02-000	Potassium	196	J	mg/kg	139
SJS17-SS02-000P	Potassium	263	J	mg/kg	133
SJS17-SS03-000	Potassium	554	J	mg/kg	147
SJS17-SS04-000	Potassium	362	J	mg/kg	162
SJS17-SS03-000	Selenium	1.2	J	mg/kg	0.76
SJS17-SS04-000	Selenium	1.7	L	mg/kg	0.83
SJS17-SS04-000	Silver	1.3	J	mg/kg	0.65
SJS17-SS01-000	Sodium	5	J	mg/kg	3
SJS17-SS03-000	Sodium	52.1	J	mg/kg	3.5
SJS17-SS04-000	Sodium	141	J	mg/kg	3.8
SJS17-SS01-000	Vanadium	76.7		mg/kg	0.63
SJS17-SS02-000	Vanadium	19.9		mg/kg	0.69
SJS17-SS02-000P	Vanadium	20.7		mg/kg	0.66
SJS17-SS03-000	Vanadium	75.3		mg/kg	0.73
SJS17-SS04-000	Vanadium	1410		mg/kg	0.8
SJS17-SS01-000	Zinc	221	K	mg/kg	0.48
SJS17-SS02-000	Zinc	389	K	mg/kg	0.53
SJS17-SS02-000P	Zinc	404	K	mg/kg	0.51
SJS17-SS03-000	Zinc	1570	K	mg/kg	0.56
SJS17-SS04-000	Zinc	2150	K	mg/kg	0.62

Notes:

B = Not detected substantially above the level reported in laboratory or field blanks.
J = Analyte present. Reported value may not be accurate or precise.
K = Analyte present. Reported value may be biased high. Actual value is expected lower.
L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Tab. J
SJC Site 17 Soil Samples - Organic Detects Compared to RBC and Background Values

Sample ID	Chemical Name	RBC Soil Industrial (ug/kg)	RBC Soil Residential (ug/kg)	Background Value (ug/kg)	Soil Type	Value	Qualifier	Units	Detection Limit	Exceeds RBC Industrial?	Exceeds RBC Residential?	Exceeds Background?
SEMIVOLATILE ORGANIC COMPOUNDS/PAHS												
SJS17-SS02-000	2-Methylnaphthalene	4,088,000	156,200	NB	NB	35	J	ug/kg	440	No	No	NB
SJS17-SS02-000P	2-Methylnaphthalene	4,088,000	156,200	NB	NB	35	J	ug/kg	420	No	No	NB
SJS17-SS03-000	2-Methylnaphthalene	4,088,000	156,200	NB	NB	37	J	ug/kg	460	No	No	NB
SJS17-SS04-000	2-Methylnaphthalene	4,088,000	156,200	NB	NB	210	J	ug/kg	510	No	No	NB
SJS17-SS01-000	Acenaphthene	12,264,000	469,200	92	MT/DA (SRF/SUB)	63	J	ug/kg	80	No	No	No
SJS17-SS02-000	Acenaphthene	12,264,000	469,200	292	BKT (SRF/SUB)	17	J	ug/kg	88	No	No	No
SJS17-SS02-000P	Acenaphthene	12,264,000	469,200	292	BKT (SRF/SUB)	71	J	ug/kg	84	No	No	No
SJS17-SS03-000	Acenaphthene	12,264,000	469,200	292	BKT (SRF/SUB)	59	J	ug/kg	93	No	No	No
SJS17-SS04-000	Acenaphthene	12,264,000	469,200	292	BKT (SRF/SUB)	370		ug/kg	100	No	No	Yes
SJS17-SS01-000	Acenaphthylene*	12,264,000	469,200	95	MT/DA (SRF/SUB)	140		ug/kg	80	No	No	Yes
SJS17-SS02-000	Acenaphthylene*	12,264,000	469,200	292	BKT (SRF/SUB)	120		ug/kg	88	No	No	No
SJS17-SS02-000P	Acenaphthylene*	12,264,000	469,200	292	BKT (SRF/SUB)	67	J	ug/kg	84	No	No	No
SJS17-SS03-000	Acenaphthylene*	12,264,000	469,200	292	BKT (SRF/SUB)	350		ug/kg	93	No	No	Yes
SJS17-SS04-000	Acenaphthylene*	12,264,000	469,200	292	BKT (SRF/SUB)	110		ug/kg	100	No	No	No
SJS17-SS01-000	Anthracene	61,320,000	2,346,000	91	MT/DA (SRF/SUB)	160		ug/kg	80	No	No	Yes
SJS17-SS02-000	Anthracene	61,320,000	2,346,000	332	BKT (SRF/SUB)	98		ug/kg	88	No	No	No
SJS17-SS02-000P	Anthracene	61,320,000	2,346,000	332	BKT (SRF/SUB)	190		ug/kg	84	No	No	No
SJS17-SS03-000	Anthracene	61,320,000	2,346,000	332	BKT (SRF/SUB)	320		ug/kg	93	No	No	No
SJS17-SS04-000	Anthracene	61,320,000	2,346,000	332	BKT (SRF/SUB)	710		ug/kg	100	No	No	Yes
SJS17-SS01-000	Benzo(a)anthracene	7,840	875	6.9	MT/DA (SRF/SUB)	690		ug/kg	80	No	No	Yes
SJS17-SS02-000	Benzo(a)anthracene	7,840	875	749	BKT (SRF/SUB)	620		ug/kg	88	No	No	No
SJS17-SS02-000P	Benzo(a)anthracene	7,840	875	749	BKT (SRF/SUB)	720		ug/kg	84	No	No	No
SJS17-SS03-000	Benzo(a)anthracene	7,840	875	749	BKT (SRF/SUB)	1,500		ug/kg	93	No	Yes	Yes
SJS17-SS04-000	Benzo(a)anthracene	7,840	875	749	BKT (SRF/SUB)	2,000	L	ug/kg	100	No	Yes	Yes
SJS17-SS01-000	Benzo(a)pyrene	785	87.5	91	MT/DA (SRF/SUB)	680		ug/kg	80	No	Yes	Yes
SJS17-SS02-000	Benzo(a)pyrene	785	87.5	732	BKT (SRF/SUB)	600		ug/kg	88	No	Yes	No
SJS17-SS02-000P	Benzo(a)pyrene	785	87.5	732	BKT (SRF/SUB)	640		ug/kg	84	No	Yes	No
SJS17-SS03-000	Benzo(a)pyrene	785	87.5	732	BKT (SRF/SUB)	1,600		ug/kg	93	Yes	Yes	Yes
SJS17-SS04-000	Benzo(a)pyrene	785	87.5	732	BKT (SRF/SUB)	1,800		ug/kg	100	Yes	Yes	Yes
SJS17-SS01-000	Benzo(b)fluoranthene	7,840	875	91	MT/DA (SRF/SUB)	710		ug/kg	80	No	No	Yes
SJS17-SS02-000	Benzo(b)fluoranthene	7,840	875	825	BKT (SRF/SUB)	590		ug/kg	88	No	No	No
SJS17-SS02-000P	Benzo(b)fluoranthene	7,840	875	825	BKT (SRF/SUB)	550		ug/kg	84	No	No	No
SJS17-SS03-000	Benzo(b)fluoranthene	7,840	875	825	BKT (SRF/SUB)	2,000		ug/kg	93	No	Yes	Yes
SJS17-SS04-000	Benzo(b)fluoranthene	7,840	875	825	BKT (SRF/SUB)	1,400		ug/kg	100	No	Yes	Yes
SJS17-SS01-000	Benzo(g,h,i)perylene*	6,132,000	234,600	91	MT/DA (SRF/SUB)	650		ug/kg	80	No	No	Yes
SJS17-SS02-000	Benzo(g,h,i)perylene*	6,132,000	234,600	501	BKT (SRF/SUB)	530		ug/kg	88	No	No	Yes
SJS17-SS02-000P	Benzo(g,h,i)perylene*	6,132,000	234,600	501	BKT (SRF/SUB)	590		ug/kg	84	No	No	Yes
SJS17-SS03-000	Benzo(g,h,i)perylene*	6,132,000	234,600	501	BKT (SRF/SUB)	1,600		ug/kg	93	No	No	Yes
SJS17-SS04-000	Benzo(g,h,i)perylene*	6,132,000	234,600	501	BKT (SRF/SUB)	1,500		ug/kg	100	No	No	Yes
SJS17-SS01-000	Benzo(k)fluoranthene	78,400	8,749	91	MT/DA (SRF/SUB)	620		ug/kg	80	No	No	Yes
SJS17-SS02-000	Benzo(k)fluoranthene	78,400	8,749	467	BKT (SRF/SUB)	440		ug/kg	88	No	No	No
SJS17-SS02-000P	Benzo(k)fluoranthene	78,400	8,749	467	BKT (SRF/SUB)	490		ug/kg	84	No	No	Yes
SJS17-SS03-000	Benzo(k)fluoranthene	78,400	8,749	467	BKT (SRF/SUB)	1,600		ug/kg	93	No	No	Yes
SJS17-SS04-000	Benzo(k)fluoranthene	78,400	8,749	467	BKT (SRF/SUB)	1,300		ug/kg	100	No	No	Yes
SJS17-SS01-000	bis(2-Ethylhexyl)phthalate	408,800	45,600	NB	NB	120	J	ug/kg	400	No	No	NB
SJS17-SS02-000	bis(2-Ethylhexyl)phthalate	408,800	45,600	NB	NB	42	J	ug/kg	440	No	No	NB
SJS17-SS02-000P	bis(2-Ethylhexyl)phthalate	408,800	45,600	NB	NB	56	J	ug/kg	420	No	No	NB
SJS17-SS03-000	bis(2-Ethylhexyl)phthalate	408,800	45,600	NB	NB	1,700	J	ug/kg	460	No	No	NB
SJS17-SS04-000	bis(2-Ethylhexyl)phthalate	408,800	45,600	NB	NB	55	J	ug/kg	510	No	No	NB
SJS17-SS01-000	Butylbenzylphthalate	40,880,000	1,564,285	NB	NB	65	J	ug/kg	400	No	No	NB

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SJC Site 17 Soil Samples - Organic Detects Compared to RBC and Background Values

Sample ID	Chemical Name	RBC Soil Industrial (ug/kg)	RBC Soil Residential (ug/kg)	Background Value (ug/kg)	Soil Type	Value	Qualifier	Units	Detection Limit	Exceeds RBC Industrial?	Exceeds RBC Residential?	Exceeds Background?
SJS17-SS02-000	Butylbenzylphthalate	40,880,000	1,564,285	NB	NB	24	J	ug/kg	440	No	No	NB
SJS17-SS02-000P	Butylbenzylphthalate	40,880,000	1,564,285	NB	NB	33	J	ug/kg	420	No	No	NB
SJS17-SS03-000	Butylbenzylphthalate	40,880,000	1,564,285	NB	NB	430	J	ug/kg	460	No	No	NB
SJS17-SS01-000	Carbazole	286,000	31,936	NB	NB	79	J	ug/kg	400	No	No	NB
SJS17-SS02-000	Carbazole	286,000	31,936	NB	NB	50	J	ug/kg	440	No	No	NB
SJS17-SS02-000P	Carbazole	286,000	31,936	NB	NB	63	J	ug/kg	420	No	No	NB
SJS17-SS03-000	Carbazole	286,000	31,936	NB	NB	130	J	ug/kg	460	No	No	NB
SJS17-SS04-000	Carbazole	286,000	31,936	NB	NB	350	J	ug/kg	510	No	No	NB
SJS17-SS01-000	Chrysene	784,000	87,500	102	MT/DA (SRF/SUB)	770		ug/kg	80	No	No	Yes
SJS17-SS02-000	Chrysene	784,000	87,500	986	BKT (SRF/SUB)	670		ug/kg	88	No	No	No
SJS17-SS02-000P	Chrysene	784,000	87,500	986	BKT (SRF/SUB)	780		ug/kg	84	No	No	No
SJS17-SS03-000	Chrysene	784,000	87,500	986	BKT (SRF/SUB)	1,900		ug/kg	93	No	No	Yes
SJS17-SS04-000	Chrysene	784,000	87,500	986	BKT (SRF/SUB)	2,200		ug/kg	100	No	No	Yes
SJS17-SS01-000	Dibenz(a,h)anthracene	784	87.5	91	MT/DA (SRF)	190		ug/kg	80	No	Yes	Yes
SJS17-SS02-000	Dibenz(a,h)anthracene	784	87.5	292	BKT (SRF/SUB)	180		ug/kg	88	No	Yes	No
SJS17-SS02-000P	Dibenz(a,h)anthracene	784	87.5	292	BKT (SRF/SUB)	170		ug/kg	84	No	Yes	No
SJS17-SS03-000	Dibenz(a,h)anthracene	784	87.5	292	BKT (SRF/SUB)	400		ug/kg	93	No	Yes	Yes
SJS17-SS04-000	Dibenz(a,h)anthracene	784	87.5	292	BKT (SRF/SUB)	440		ug/kg	100	No	Yes	Yes
SJS17-SS01-000	Dibenzofuran	817,600	31,286	NB	NB	25	J	ug/kg	400	No	No	No
SJS17-SS02-000	Dibenzofuran	817,600	31,286	NB	NB	26	J	ug/kg	440	No	No	No
SJS17-SS02-000P	Dibenzofuran	817,600	31,286	NB	NB	33	J	ug/kg	420	No	No	No
SJS17-SS03-000	Dibenzofuran	817,600	31,286	NB	NB	44	J	ug/kg	460	No	No	No
SJS17-SS04-000	Dibenzofuran	817,600	31,286	NB	NB	220	J	ug/kg	510	No	No	No
SJS17-SS01-000	Di-n-butylphthalate	20,440,000	782,143	NB	NB	41	J	ug/kg	400	No	No	No
SJS17-SS03-000	Di-n-butylphthalate	20,440,000	782,143	NB	NB	70	J	ug/kg	460	No	No	No
SJS17-SS04-000	Di-n-butylphthalate	20,440,000	782,143	NB	NB	84	J	ug/kg	510	No	No	No
SJS17-SS01-000	Fluoranthene	8,176,000	312,857	103	MT/DA (SRF/SUB)	1,400		ug/kg	80	No	No	Yes
SJS17-SS02-000	Fluoranthene	8,176,000	312,857	2,500	BKT (SRF/SUB)	1,100		ug/kg	88	No	No	No
SJS17-SS02-000P	Fluoranthene	8,176,000	312,857	2,500	BKT (SRF/SUB)	1,500		ug/kg	84	No	No	No
SJS17-SS03-000	Fluoranthene	8,176,000	312,857	2,500	BKT (SRF/SUB)	2,400		ug/kg	93	No	No	No
SJS17-SS04-000	Fluoranthene	8,176,000	312,857	2,500	BKT (SRF/SUB)	4,400		ug/kg	100	No	No	Yes
SJS17-SS01-000	Fluorene	8,176,000	312,857	92	MT/DA (SRF)	48	J	ug/kg	80	No	No	No
SJS17-SS02-000	Fluorene	8,176,000	312,857	292	BKT (SRF/SUB)	21	J	ug/kg	88	No	No	No
SJS17-SS02-000P	Fluorene	8,176,000	312,857	292	BKT (SRF/SUB)	72	J	ug/kg	84	No	No	No
SJS17-SS03-000	Fluorene	8,176,000	312,857	292	BKT (SRF/SUB)	62	J	ug/kg	93	No	No	No
SJS17-SS04-000	Fluorene	8,176,000	312,857	292	BKT (SRF/SUB)	380	L	ug/kg	100	No	No	Yes
SJS17-SS01-000	Indeno(1,2,3-cd)pyrene	7,840	875	91	MT/DA (SRF/SUB)	540		ug/kg	80	No	No	Yes
SJS17-SS02-000	Indeno(1,2,3-cd)pyrene	7,840	875	472	BKT (SRF/SUB)	440		ug/kg	88	No	No	No
SJS17-SS02-000P	Indeno(1,2,3-cd)pyrene	7,840	875	472	BKT (SRF/SUB)	460		ug/kg	84	No	No	No
SJS17-SS03-000	Indeno(1,2,3-cd)pyrene	7,840	875	472	BKT (SRF/SUB)	1,500		ug/kg	93	No	Yes	Yes
SJS17-SS04-000	Indeno(1,2,3-cd)pyrene	7,840	875	472	BKT (SRF/SUB)	1,300		ug/kg	100	No	Yes	Yes
SJS17-SS01-000	Naphthalene	4,088,000	156,428	92	MT/DA (SRF)	14	J	ug/kg	80	No	No	No
SJS17-SS02-000	Naphthalene	4,088,000	156,428	292	BKT (SRF/SUB)	32	J	ug/kg	88	No	No	No
SJS17-SS02-000P	Naphthalene	4,088,000	156,428	292	BKT (SRF/SUB)	30	J	ug/kg	84	No	No	No
SJS17-SS03-000	Naphthalene	4,088,000	156,428	292	BKT (SRF/SUB)	44	J	ug/kg	93	No	No	No
SJS17-SS04-000	Naphthalene	4,088,000	156,428	292	BKT (SRF/SUB)	250		ug/kg	100	No	No	No
SJS17-SS01-000	Phenanthrene*	6,132,000	234,642	91	MT/DA (SRF/SUB)	650		ug/kg	80	No	No	Yes
SJS17-SS02-000	Phenanthrene*	6,132,000	234,642	376	BKT (SRF/SUB)	340		ug/kg	88	No	No	No
SJS17-SS02-000P	Phenanthrene*	6,132,000	234,642	376	BKT (SRF/SUB)	1,000		ug/kg	84	No	No	Yes
SJS17-SS03-000	Phenanthrene*	6,132,000	234,642	376	BKT (SRF/SUB)	620		ug/kg	93	No	No	Yes
SJS17-SS04-000	Phenanthrene*	6,132,000	234,642	376	BKT (SRF/SUB)	4,000		ug/kg	100	No	No	Yes

Tab. J
SJC Site 17 Soil Samples - Organic Detects Compared to RBC and Background Values

Sample ID	Chemical Name	RBC Soil Industrial (ug/kg)	RBC Soil Residential (ug/kg)	Background Value (ug/kg)	Soil Type	Value	Qualifier	Units	Detection Limit	Exceeds RBC Industrial?	Exceeds RBC Residential?	Exceeds Background?
SJS17-SS01-000	Pyrene	6,132,000	234,642	125	MT/DA (SRF/SUB)	1,300		ug/kg	80	No	No	Yes
SJS17-SS02-000	Pyrene	6,132,000	234,642	1,905	BKT (SRF/SUB)	1,200		ug/kg	88	No	No	No
SJS17-SS02-000P	Pyrene	6,132,000	234,642	1,905	BKT (SRF/SUB)	1,700		ug/kg	84	No	No	No
SJS17-SS03-000	Pyrene	6,132,000	234,642	1,905	BKT (SRF/SUB)	2,900		ug/kg	93	No	No	Yes
SJS17-SS04-000	Pyrene	6,132,000	234,642	1,905	BKT (SRF/SUB)	4,600		ug/kg	100	No	No	Yes
PESTICIDES/PCBS												
SJS17-SS01-000	4,4'-DDD	23,847	2,661	10.6	MT/DA (SRF)	61	J	ug/kg	12	No	No	Yes
SJS17-SS02-000	4,4'-DDD	23,847	2,661	308	BKT (SRF/SUB)	120		ug/kg	4.4	No	No	No
SJS17-SS02-000P	4,4'-DDD	23,847	2,661	308	BKT (SRF/SUB)	110		ug/kg	4.2	No	No	No
SJS17-SS03-000	4,4'-DDD	23,847	2,661	308	BKT (SRF/SUB)	710		ug/kg	23	No	No	Yes
SJS17-SS04-000R2	4,4'-DDD	23,847	2,661	308	BKT (SRF/SUB)	140		ug/kg	10	No	No	No
SJS17-SS01-000	4,4'-DDE	16,833	1,878	532	MT/DA (SRF)	1,300		ug/kg	12	No	No	Yes
SJS17-SS02-000	4,4'-DDE	16,833	1,878	269	BKT (SRF)	160		ug/kg	4.4	No	No	No
SJS17-SS02-000P	4,4'-DDE	16,833	1,878	269	BKT (SRF)	86		ug/kg	4.2	No	No	No
SJS17-SS03-000	4,4'-DDE	16,833	1,878	269	BKT (SRF)	210		ug/kg	23	No	No	No
SJS17-SS04-000R2	4,4'-DDE	16,833	1,878	269	BKT (SRF)	1,100		ug/kg	10	No	No	Yes
SJS17-SS01-000	4,4'-DDT	16,833	1,878	237	MT/DA (SRF)	1,300		ug/kg	12	No	No	Yes
SJS17-SS02-000	4,4'-DDT	16,833	1,878	34	BKT (SRF/SUB)	320		ug/kg	4.4	No	No	Yes
SJS17-SS02-000P	4,4'-DDT	16,833	1,878	34	BKT (SRF/SUB)	180		ug/kg	4.2	No	No	Yes
SJS17-SS03-000	4,4'-DDT	16,833	1,878	34	BKT (SRF/SUB)	300		ug/kg	23	No	No	Yes
SJS17-SS04-000R2	4,4'-DDT	16,833	1,878	34	BKT (SRF/SUB)	1,200		ug/kg	10	No	No	Yes
SJS17-SS02-000P	alpha-Chlordane*	16,352	1,825	9.1	BKT (SRF/SUB)	1.1	J	ug/kg	2.1	No	No	No
SJS17-SS01-000	Aroclor-1260	2,862	319	NB	NB	150		ug/kg	120	No	No	No
SJS17-SS03-000	Aroclor-1260	2,862	319	NB	NB	2,700	C	ug/kg	230	No	Yes	No
SJS17-SS04-000R2	Aroclor-1260	2,862	319	NB	NB	110		ug/kg	100	No	No	No
SJS17-SS01-000	Endosulfan II	1,226,400	46,929	13.5	MT/DA (SRF)	8	J	ug/kg	12	No	No	No
SJS17-SS03-000	Endosulfan II	1,226,400	46,929	14	BKT (SRF/SUB)	53	J	ug/kg	23	No	No	Yes
SJS17-SS04-000R2	Endosulfan II	1,226,400	46,929	14	BKT (SRF/SUB)	7.9	J	ug/kg	10	No	No	No
SJS17-SS03-000	Endrin	61,320	2,346	14	BKT (SRF/SUB)	24	J	ug/kg	23	No	No	Yes
SJS17-SS01-000	Endrin aldehyde	61,320	2,346	11.6	MT/DA (SRF)	14		ug/kg	12	No	No	Yes
SJS17-SS02-000	Endrin aldehyde	61,320	2,346	15	BKT (SRF/SUB)	2.2	J	ug/kg	4.4	No	No	No
SJS17-SS02-000P	Endrin aldehyde	61,320	2,346	15	BKT (SRF/SUB)	2.2	J	ug/kg	4.2	No	No	No
SJS17-SS03-000	Endrin aldehyde	61,320	2,346	15	BKT (SRF/SUB)	73	J	ug/kg	23	No	No	Yes
SJS17-SS03-000	gamma-Chlordane	16,352	1,825	9.7	BKT (SRF/SUB)	6.3	J	ug/kg	12	No	No	No

Notes:

Risk Based Concentration (RBC) screening values for residential areas from Region 3 Table (dated 10/5/00) unless otherwise noted.

* = Screening value not listed on RBC tables so a surrogate value was used as directed by risk assessor.

Soil samples at Site 17 are classified as follows: SS01 and SS02 are in the Munden-Tetotum Association and SS03 and SS04 are in the Bohicket Association.

Soil types are described as follows: BKT = Bohicket Association, MT=Munden-Tetotum Association, MT/DA = Munden-Tetotum/Drugston-Augusta Association.

Soil type in parantheses defines the depth sample was collected: SRF = surface, SUB = subsurface, and SRF/SUB = surface and subsurface.

B = Not detected substantially above the level reported in laboratory or field blanks.

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

NA = Not applicable. RBC standard not set or comparison not available.

NB = No background concentration calculated.

Table 4

SJC Site 17 Soil Samples - Organic Detects Exceeding Ecological Risk Values Compared to Background Samples

Sample ID	Chemical Name	Ecological Comparison Criteria	Criterion Value	Background Value (ug/kg)	Soil Type	Value	Qualifier	Units	Exceeds Background?
SJS17-SS02-000	4,4'-DDD	BTAG soil flora/fauna value	100	308	BKT (SRF/SUB)	120		ug/kg	No
SJS17-SS02-000P	4,4'-DDD	BTAG soil flora/fauna value	100	308	BKT (SRF/SUB)	110		ug/kg	No
SJS17-SS03-000	4,4'-DDD	BTAG soil flora/fauna value	100	308	BKT (SRF/SUB)	710		ug/kg	Yes
SJS17-SS04-000R2	4,4'-DDD	BTAG soil flora/fauna value	100	308	BKT (SRF/SUB)	140		ug/kg	No
SJS17-SS01-000	4,4'-DDE	BTAG soil flora/fauna value	100	532	MT/DA (SRF)	1,300		ug/kg	Yes
SJS17-SS02-000	4,4'-DDE	BTAG soil flora/fauna value	100	269	BKT (SRF)	160		ug/kg	No
SJS17-SS03-000	4,4'-DDE	BTAG soil flora/fauna value	100	269	BKT (SRF)	210		ug/kg	No
SJS17-SS04-000R2	4,4'-DDE	BTAG soil flora/fauna value	100	269	BKT (SRF)	1,100		ug/kg	Yes
SJS17-SS01-000	4,4'-DDT	BTAG soil flora/fauna value	100	237	MT/DA (SRF)	1,300		ug/kg	Yes
SJS17-SS02-000	4,4'-DDT	BTAG soil flora/fauna value	100	34	BKT (SRF/SUB)	320		ug/kg	Yes
SJS17-SS02-000P	4,4'-DDT	BTAG soil flora/fauna value	100	34	BKT (SRF/SUB)	180		ug/kg	Yes
SJS17-SS03-000	4,4'-DDT	BTAG soil flora/fauna value	100	34	BKT (SRF/SUB)	300		ug/kg	Yes
SJS17-SS04-000R2	4,4'-DDT	BTAG soil flora/fauna value	100	34	BKT (SRF/SUB)	1,200		ug/kg	Yes
SJS17-SS01-000	Aroclor-1260	BTAG soil flora value	100	NB	NB	150		ug/kg	No
SJS17-SS03-000	Aroclor-1260	BTAG soil flora value	100	NB	NB	2,700	C	ug/kg	No
SJS17-SS04-000R2	Aroclor-1260	BTAG soil flora value	100	NB	NB	110		ug/kg	No
SJS17-SS01-000	Acenaphthylene	BTAG soil flora/fauna value	100	95	MT/DA (SRF/SUB)	140		ug/kg	Yes
SJS17-SS02-000	Acenaphthylene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	120		ug/kg	No
SJS17-SS03-000	Acenaphthylene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	350		ug/kg	Yes
SJS17-SS04-000	Acenaphthylene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	110		ug/kg	No
SJS17-SS01-000	Benzo(a)anthracene	BTAG soil flora/fauna value	100	6.9	MT/DA (SRF/SUB)	690		ug/kg	Yes
SJS17-SS02-000	Benzo(a)anthracene	BTAG soil flora/fauna value	100	749	BKT (SRF/SUB)	620		ug/kg	No
SJS17-SS02-000P	Benzo(a)anthracene	BTAG soil flora/fauna value	100	749	BKT (SRF/SUB)	720		ug/kg	No
SJS17-SS03-000	Benzo(a)anthracene	BTAG soil flora/fauna value	100	749	BKT (SRF/SUB)	1,500		ug/kg	Yes
SJS17-SS04-000	Benzo(a)anthracene	BTAG soil flora/fauna value	100	749	BKT (SRF/SUB)	2,000	L	ug/kg	Yes
SJS17-SS01-000	Benzo(a)pyrene	BTAG soil fauna value	100	91	MT/DA (SRF/SUB)	680		ug/kg	Yes
SJS17-SS02-000	Benzo(a)pyrene	BTAG soil fauna value	100	732	BKT (SRF/SUB)	600		ug/kg	No
SJS17-SS02-000P	Benzo(a)pyrene	BTAG soil fauna value	100	732	BKT (SRF/SUB)	640		ug/kg	No
SJS17-SS03-000	Benzo(a)pyrene	BTAG soil fauna value	100	732	BKT (SRF/SUB)	1,600		ug/kg	Yes
SJS17-SS04-000	Benzo(a)pyrene	BTAG soil fauna value	100	732	BKT (SRF/SUB)	1,800		ug/kg	Yes
SJS17-SS01-000	Benzo(b)fluoranthene	BTAG soil flora/fauna value	100	91	MT/DA (SRF/SUB)	710		ug/kg	Yes
SJS17-SS02-000	Benzo(b)fluoranthene	BTAG soil flora/fauna value	100	825	BKT (SRF/SUB)	590		ug/kg	No
SJS17-SS02-000P	Benzo(b)fluoranthene	BTAG soil flora/fauna value	100	825	BKT (SRF/SUB)	550		ug/kg	No
SJS17-SS03-000	Benzo(b)fluoranthene	BTAG soil flora/fauna value	100	825	BKT (SRF/SUB)	2,000		ug/kg	Yes
SJS17-SS04-000	Benzo(b)fluoranthene	BTAG soil flora/fauna value	100	825	BKT (SRF/SUB)	1,400		ug/kg	Yes
SJS17-SS01-000	Benzo(k)fluoranthene	BTAG soil flora/fauna value	100	91	MT/DA (SRF/SUB)	620		ug/kg	Yes
SJS17-SS02-000	Benzo(k)fluoranthene	BTAG soil flora/fauna value	100	467	BKT (SRF/SUB)	440		ug/kg	No
SJS17-SS02-000P	Benzo(k)fluoranthene	BTAG soil flora/fauna value	100	467	BKT (SRF/SUB)	490		ug/kg	Yes
SJS17-SS03-000	Benzo(k)fluoranthene	BTAG soil flora/fauna value	100	467	BKT (SRF/SUB)	1,600		ug/kg	Yes
SJS17-SS04-000	Benzo(k)fluoranthene	BTAG soil flora/fauna value	100	467	BKT (SRF/SUB)	1,300		ug/kg	Yes

Table 4

SJC Site 17 Soil Samples - Organic Detects Exceeding Ecological Risk Values Compared to Background Samples

Sample ID	Chemical Name	Ecological Comparison Criteria	Criterion Value	Background Value (ug/kg)	Soil Type	Value	Qualifier	Units	Exceeds Background?
SJS17-SS01-000	Chrysene	BTAG soil flora/fauna value	100	102	MT/DA (SRF/SUB)	770		ug/kg	Yes
SJS17-SS02-000	Chrysene	BTAG soil flora/fauna value	100	986	BKT (SRF/SUB)	670		ug/kg	No
SJS17-SS02-000P	Chrysene	BTAG soil flora/fauna value	100	986	BKT (SRF/SUB)	780		ug/kg	No
SJS17-SS03-000	Chrysene	BTAG soil flora/fauna value	100	986	BKT (SRF/SUB)	1,900		ug/kg	Yes
SJS17-SS04-000	Chrysene	BTAG soil flora/fauna value	100	986	BKT (SRF/SUB)	2,200		ug/kg	Yes
SJS17-SS01-000	Dibenz(a,h)anthracene	BTAG soil flora/fauna value	100	91	MT/DA (SRF)	190		ug/kg	Yes
SJS17-SS02-000	Dibenz(a,h)anthracene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	180		ug/kg	No
SJS17-SS02-000P	Dibenz(a,h)anthracene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	170		ug/kg	No
SJS17-SS03-000	Dibenz(a,h)anthracene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	400		ug/kg	Yes
SJS17-SS04-000	Dibenz(a,h)anthracene	BTAG soil flora/fauna value	100	292	BKT (SRF/SUB)	440		ug/kg	Yes
SJS17-SS01-000	Fluoranthene	BTAG soil flora/fauna value	100	103	MT/DA (SRF/SUB)	1,400		ug/kg	Yes
SJS17-SS02-000	Fluoranthene	BTAG soil flora/fauna value	100	2,500	BKT (SRF/SUB)	1,100		ug/kg	No
SJS17-SS02-000P	Fluoranthene	BTAG soil flora/fauna value	100	2,500	BKT (SRF/SUB)	1,500		ug/kg	No
SJS17-SS03-000	Fluoranthene	BTAG soil flora/fauna value	100	2,500	BKT (SRF/SUB)	2,400		ug/kg	No
SJS17-SS04-000	Fluoranthene	BTAG soil flora/fauna value	100	2,500	BKT (SRF/SUB)	4,400		ug/kg	Yes
SJS17-SS04-000	Fluorene	BTAG soil flora value	100	292	BKT (SRF/SUB)	380	L	ug/kg	Yes
SJS17-SS01-000	Indeno(1,2,3-cd)pyrene	BTAG soil fauna value	100	91	MT/DA (SRF/SUB)	540		ug/kg	Yes
SJS17-SS02-000	Indeno(1,2,3-cd)pyrene	BTAG soil fauna value	100	472	BKT (SRF/SUB)	440		ug/kg	No
SJS17-SS02-000P	Indeno(1,2,3-cd)pyrene	BTAG soil fauna value	100	472	BKT (SRF/SUB)	460		ug/kg	No
SJS17-SS03-000	Indeno(1,2,3-cd)pyrene	BTAG soil fauna value	100	472	BKT (SRF/SUB)	1,500		ug/kg	Yes
SJS17-SS04-000	Indeno(1,2,3-cd)pyrene	BTAG soil fauna value	100	472	BKT (SRF/SUB)	1,300		ug/kg	Yes
SJS17-SS01-000	Phenanthrene	BTAG soil flora value	100	91	MT/DA (SRF/SUB)	650		ug/kg	Yes
SJS17-SS02-000	Phenanthrene	BTAG soil flora value	100	376	BKT (SRF/SUB)	340		ug/kg	No
SJS17-SS02-000P	Phenanthrene	BTAG soil flora value	100	376	BKT (SRF/SUB)	1,000		ug/kg	Yes
SJS17-SS03-000	Phenanthrene	BTAG soil flora value	100	376	BKT (SRF/SUB)	620		ug/kg	Yes
SJS17-SS04-000	Phenanthrene	BTAG soil flora value	100	376	BKT (SRF/SUB)	4,000		ug/kg	Yes
SJS17-SS01-000	Pyrene	BTAG soil flora/fauna value	100	125	MT/DA (SRF/SUB)	1,300		ug/kg	Yes
SJS17-SS02-000	Pyrene	BTAG soil flora/fauna value	100	1,905	BKT (SRF/SUB)	1,200		ug/kg	No
SJS17-SS02-000P	Pyrene	BTAG soil flora/fauna value	100	1,905	BKT (SRF/SUB)	1,700		ug/kg	No
SJS17-SS03-000	Pyrene	BTAG soil flora/fauna value	100	1,905	BKT (SRF/SUB)	2,900		ug/kg	Yes
SJS17-SS04-000	Pyrene	BTAG soil flora/fauna value	100	1,905	BKT (SRF/SUB)	4,600		ug/kg	Yes

Notes:

Soil samples at Site 17 are classified as follows: SS01 is in the Munden-Tetotum Association and SS02, SS03 and SS04 are in the Bohicket Association. Classification based on field description.

Soil types are described as follows: BKT = Bohicket Association, MT=Munden-Tetotum Association, MT/DA = Munden-Tetotum/Dragsdon-Augusta Association.

Soil type in parantheses defines the depth sample was collected: SRF = surface, SUB = subsurface, and SRF/SUB = surface and subsurface.

NA = Not applicable. RBC standard not set or comparison not available.

NB = No background concentration calculated.

C = Presence of pesticide confirmed by GC/MS.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Table 5
SJC Site 17 Soil Samples - Inorganic Detected Compared to RBC and Background Values

Sample ID	Chemical Name	RBC Soil Industrial (mg/kg)	RBC Soil Residential (mg/kg)	Background Value (mg/kg)	Soil Type	Value	Qualifier	Units	Detection Limit	Exceeds RBC Industrial?	Exceeds RBC Residential?	Exceeds Background?
SJS17-SS01-000	Aluminum	204,400	7,821	7,669	MT/DA (SRF)	6,210		mg/kg	3.5	No	No	No
SJS17-SS02-000	Aluminum	204,400	7,821	30,002	BKT (SRF/SUB)	2,690		mg/kg	3.9	No	No	No
SJS17-SS02-000P	Aluminum	204,400	7,821	30,002	BKT (SRF/SUB)	3,600		mg/kg	3.7	No	No	No
SJS17-SS03-000	Aluminum	204,400	7,821	30,002	BKT (SRF/SUB)	5,320		mg/kg	4.1	No	No	No
SJS17-SS04-000	Aluminum	204,400	7,821	30,002	BKT (SRF/SUB)	5,350		mg/kg	4.5	No	No	No
SJS17-SS01-000	Antimony	81.76	3.13	0.7	MT/DA (SRF)	1.1	J	mg/kg	0.48	No	No	Yes
SJS17-SS03-000	Antimony	81.76	3.13	2.4	BKT (SRF)	3.5	J	mg/kg	0.56	No	Yes	Yes
SJS17-SS04-000	Antimony	81.76	3.13	2.4	BKT (SRF)	6.3	J	mg/kg	0.62	No	Yes	Yes
SJS17-SS01-000	Arsenic	3.82	0.43	5.7	MT/DA (SRF/SUB)	8.7		mg/kg	0.51	Yes	Yes	Yes
SJS17-SS02-000	Arsenic	3.82	0.43	21	BKT (SRF/SUB)	9		mg/kg	0.56	Yes	Yes	No
SJS17-SS02-000P	Arsenic	3.82	0.43	21	BKT (SRF/SUB)	7.8		mg/kg	0.53	Yes	Yes	No
SJS17-SS03-000	Arsenic	3.82	0.43	21	BKT (SRF/SUB)	10.6		mg/kg	0.59	Yes	Yes	No
SJS17-SS04-000	Arsenic	3.82	0.43	21	BKT (SRF/SUB)	15.5		mg/kg	0.65	Yes	Yes	No
SJS17-SS01-000	Barium	14,308	547.5	40	MT/DA (SRF)	63.1		mg/kg	0.096	No	No	Yes
SJS17-SS02-000	Barium	14,308	547.5	83	BKT (SRF/SUB)	116		mg/kg	0.11	No	No	Yes
SJS17-SS02-000P	Barium	14,308	547.5	83	BKT (SRF/SUB)	54.4		mg/kg	0.1	No	No	No
SJS17-SS03-000	Barium	14,308	547.5	83	BKT (SRF/SUB)	122		mg/kg	0.11	No	No	Yes
SJS17-SS04-000	Barium	14,308	547.5	83	BKT (SRF/SUB)	404		mg/kg	0.12	No	No	Yes
SJS17-SS01-000	Beryllium	4,088	156.4	0.28	MT/DA (SRF/SUB)	0.27	B	mg/kg	0.031	No	No	No
SJS17-SS02-000	Beryllium	4,088	156.4	2.3	BKT (SRF/SUB)	0.2	B	mg/kg	0.034	No	No	No
SJS17-SS02-000P	Beryllium	4,088	156.4	2.3	BKT (SRF/SUB)	0.16	B	mg/kg	0.033	No	No	No
SJS17-SS03-000	Beryllium	4,088	156.4	2.3	BKT (SRF/SUB)	0.32	B	mg/kg	0.036	No	No	No
SJS17-SS01-000	Cadmium*	1,022	39.1	NB	NB	3.7	B	mg/kg	0.63	No	No	NB
SJS17-SS02-000	Cadmium*	1,022	39.1	NB	NB	1.7	B	mg/kg	0.69	No	No	NB
SJS17-SS02-000P	Cadmium*	1,022	39.1	NB	NB	1.5	B	mg/kg	0.66	No	No	NB
SJS17-SS03-000	Cadmium*	1,022	39.1	NB	NB	9.3	K	mg/kg	0.73	No	No	NB
SJS17-SS04-000	Cadmium*	1,022	39.1	NB	NB	5.3	K	mg/kg	0.8	No	No	NB
SJS17-SS01-000	Calcium	NA	NA	1,225	MT/DA (SRF/SUB)	2,460		mg/kg	4.5	No	No	Yes
SJS17-SS02-000	Calcium	NA	NA	3,530	BKT (SRF/SUB)	4,730		mg/kg	5	No	No	Yes
SJS17-SS02-000P	Calcium	NA	NA	3,530	BKT (SRF/SUB)	2,550		mg/kg	4.7	No	No	No
SJS17-SS03-000	Calcium	NA	NA	3,530	BKT (SRF/SUB)	9,630		mg/kg	5.2	No	No	Yes
SJS17-SS04-000	Calcium	NA	NA	3,530	BKT (SRF/SUB)	4,730		mg/kg	5.8	No	No	Yes
SJS17-SS01-000	Chromium*	6,132	234.6	7	MT (SRF)	20.6	K	mg/kg	0.63	No	No	Yes
SJS17-SS02-000	Chromium*	6,132	234.6	53	BKT (SRF/SUB)	10.9	K	mg/kg	0.69	No	No	No
SJS17-SS02-000P	Chromium*	6,132	234.6	53	BKT (SRF/SUB)	11.1	K	mg/kg	0.66	No	No	No
SJS17-SS03-000	Chromium*	6,132	234.6	53	BKT (SRF/SUB)	105	K	mg/kg	0.73	No	No	Yes
SJS17-SS04-000	Chromium*	6,132	234.6	53	BKT (SRF/SUB)	45.4	K	mg/kg	0.8	No	No	No
SJS17-SS01-000	Cobalt	4,088	156.4	2.2	MT (SRF/SUB)	2.8	B	mg/kg	0.99	No	No	Yes
SJS17-SS02-000	Cobalt	4,088	156.4	30	BKT (SRF/SUB)	2.4	B	mg/kg	1.1	No	No	No
SJS17-SS02-000P	Cobalt	4,088	156.4	30	BKT (SRF/SUB)	2.7	B	mg/kg	1	No	No	No
SJS17-SS03-000	Cobalt	4,088	156.4	30	BKT (SRF/SUB)	10.2	J	mg/kg	1.2	No	No	No
SJS17-SS04-000	Cobalt	4,088	156.4	30	BKT (SRF/SUB)	10.2	J	mg/kg	1.3	No	No	No
SJS17-SS01-000	Copper	8,176	312.8	17.1	MT/DA (SRF)	102	J	mg/kg	0.48	No	No	Yes
SJS17-SS02-000	Copper	8,176	312.8	81	BKT (SRF)	183	J	mg/kg	0.53	No	No	Yes
SJS17-SS02-000P	Copper	8,176	312.8	81	BKT (SRF)	96.7	J	mg/kg	0.51	No	No	Yes
SJS17-SS03-000	Copper	8,176	312.8	81	BKT (SRF)	569	J	mg/kg	0.56	No	Yes	Yes
SJS17-SS04-000	Copper	8,176	312.8	81	BKT (SRF)	5,030	J	mg/kg	0.62	No	Yes	Yes
SJS17-SS01-000	Iron	61,320	2,346	3,669	MT (SRF)	8,850	K	mg/kg	0.91	No	Yes	Yes
SJS17-SS02-000	Iron	61,320	2,346	50,142	BKT (SRF/SUB)	8,210	K	mg/kg	1	No	Yes	No
SJS17-SS02-000P	Iron	61,320	2,346	50,142	BKT (SRF/SUB)	8,980	K	mg/kg	0.96	No	Yes	No
SJS17-SS03-000	Iron	61,320	2,346	50,142	BKT (SRF/SUB)	45,200	K	mg/kg	1.1	No	Yes	No
SJS17-SS04-000	Iron	61,320	2,346	50,142	BKT (SRF/SUB)	24,800	K	mg/kg	1.2	No	Yes	No
SJS17-SS01-000	Lead*	1,000	400	61	MT/DA (SRF)	144	K	mg/kg	0.36	No	No	Yes
SJS17-SS02-000	Lead*	1,000	400	198	BKT (SRF)	294	K	mg/kg	0.4	No	No	Yes
SJS17-SS02-000P	Lead*	1,000	400	198	BKT (SRF)	331	K	mg/kg	0.38	No	No	Yes

Table 5
SJC Site 17 Soil Samples - Inorganic Detected Compared to RBC and Background Values

Sample ID	Chemical Name	RBC Soil Industrial (mg/kg)	RBC Soil Residential (mg/kg)	Background Value (mg/kg)	Soil Type	Value	Qualifier	Units	Detection Limit	Exceeds RBC Industrial?	Exceeds RBC Residential?	Exceeds Background?
SJS17-SS03-000	Lead*	1,000	400	198	BKT (SRF)	1,270	K	mg/kg	0.42	Yes	Yes	Yes
SJS17-SS04-000	Lead*	1,000	400	198	BKT (SRF)	3,130	K	mg/kg	2.3	Yes	Yes	Yes
SJS17-SS01-000	Magnesium	NA	NA	527	MT (SRF)	890	J	mg/kg	5.7	No	No	Yes
SJS17-SS02-000	Magnesium	NA	NA	10,058	BKT (SRF/SUB)	376	J	mg/kg	6.2	No	No	No
SJS17-SS02-000P	Magnesium	NA	NA	10,058	BKT (SRF/SUB)	442	J	mg/kg	6	No	No	No
SJS17-SS03-000	Magnesium	NA	NA	10,058	BKT (SRF/SUB)	1,480	J	mg/kg	6.6	No	No	No
SJS17-SS04-000	Magnesium	NA	NA	10,058	BKT (SRF/SUB)	1,140	J	mg/kg	7.3	No	No	No
SJS17-SS01-000	Manganese*	4,088	156.4	42	MT (SRF)	93.3	J	mg/kg	0.17	No	No	Yes
SJS17-SS02-000	Manganese*	4,088	156.4	345	BKT (SRF/SUB)	106	J	mg/kg	0.19	No	No	No
SJS17-SS02-000P	Manganese*	4,088	156.4	345	BKT (SRF/SUB)	144	J	mg/kg	0.18	No	No	No
SJS17-SS03-000	Manganese*	4,088	156.4	345	BKT (SRF/SUB)	307	J	mg/kg	0.2	No	Yes	No
SJS17-SS04-000	Manganese*	4,088	156.4	345	BKT (SRF/SUB)	451	J	mg/kg	0.22	No	Yes	Yes
SJS17-SS01-000	Mercury*	61.3	2.35	0.3	MT (SRF)	0.4	L	mg/kg	0.048	No	No	Yes
SJS17-SS02-000	Mercury*	61.3	2.35	0.6	BKT (SRF/SUB)	0.97	L	mg/kg	0.052	No	No	Yes
SJS17-SS02-000P	Mercury*	61.3	2.35	0.6	BKT (SRF/SUB)	0.94	L	mg/kg	0.05	No	No	Yes
SJS17-SS03-000	Mercury*	61.3	2.35	0.6	BKT (SRF/SUB)	1.8	L	mg/kg	0.055	No	No	Yes
SJS17-SS04-000	Mercury*	61.3	2.35	0.6	BKT (SRF/SUB)	0.78	L	mg/kg	0.061	No	No	Yes
SJS17-SS01-000	Nickel	4,088	156.4	6.9	MT (SRF/SUB)	17.1	K	mg/kg	2.4	No	No	Yes
SJS17-SS02-000	Nickel	4,088	156.4	44	BKT (SRF/SUB)	8.3	J	mg/kg	2.6	No	No	No
SJS17-SS02-000P	Nickel	4,088	156.4	44	BKT (SRF/SUB)	12	K	mg/kg	2.5	No	No	No
SJS17-SS03-000	Nickel	4,088	156.4	44	BKT (SRF/SUB)	40.3	K	mg/kg	2.7	No	No	No
SJS17-SS04-000	Nickel	4,088	156.4	44	BKT (SRF/SUB)	193	K	mg/kg	3	No	Yes	Yes
SJS17-SS01-000	Potassium	NA	NA	368	MT (SRF/SUB)	542	J	mg/kg	127	No	No	Yes
SJS17-SS02-000	Potassium	NA	NA	6,046	BKT (SRF/SUB)	196	J	mg/kg	139	No	No	No
SJS17-SS02-000P	Potassium	NA	NA	6,046	BKT (SRF/SUB)	263	J	mg/kg	133	No	No	No
SJS17-SS03-000	Potassium	NA	NA	6,046	BKT (SRF/SUB)	554	J	mg/kg	147	No	No	No
SJS17-SS04-000	Potassium	NA	NA	6,046	BKT (SRF/SUB)	362	J	mg/kg	162	No	No	No
SJS17-SS03-000	Selenium	1,022	39.1	2.6	BKT (SRF/SUB)	1.2	J	mg/kg	0.76	No	No	No
SJS17-SS04-000	Selenium	1,022	39.1	2.6	BKT (SRF/SUB)	1.7	L	mg/kg	0.83	No	No	No
SJS17-SS04-000	Silver	1,022	39.1	1.8	BKT (SRF/SUB)	1.3	J	mg/kg	0.65	No	No	No
SJS17-SS01-000	Sodium	NA	NA	174	MT (SRF/SUB)	5	J	mg/kg	3	No	No	No
SJS17-SS03-000	Sodium	NA	NA	20,145	BKT (SRF/SUB)	52.1	J	mg/kg	3.5	No	No	No
SJS17-SS04-000	Sodium	NA	NA	20,145	BKT (SRF/SUB)	141	J	mg/kg	3.8	No	No	No
SJS17-SS01-000	Vanadium	1,431	54.8	26.6	MT (SRF/SUB)	76.7		mg/kg	0.63	No	Yes	Yes
SJS17-SS02-000	Vanadium	1,431	54.8	72	BKT (SRF/SUB)	19.9		mg/kg	0.69	No	No	No
SJS17-SS02-000P	Vanadium	1,431	54.8	72	BKT (SRF/SUB)	20.7		mg/kg	0.66	No	No	No
SJS17-SS03-000	Vanadium	1,431	54.8	72	BKT (SRF/SUB)	75.3		mg/kg	0.73	No	Yes	Yes
SJS17-SS04-000	Vanadium	1,431	54.8	72	BKT (SRF/SUB)	1,410		mg/kg	0.8	No	Yes	Yes
SJS17-SS01-000	Zinc	61,320	2,346	38	MT (SRF)	221	K	mg/kg	0.48	No	No	Yes
SJS17-SS02-000	Zinc	61,320	2,346	372	BKT (SRF/SUB)	389	K	mg/kg	0.53	No	No	Yes
SJS17-SS02-000P	Zinc	61,320	2,346	372	BKT (SRF/SUB)	404	K	mg/kg	0.51	No	No	Yes
SJS17-SS03-000	Zinc	61,320	2,346	372	BKT (SRF/SUB)	1,570	K	mg/kg	0.56	No	No	Yes
SJS17-SS04-000	Zinc	61,320	2,346	372	BKT (SRF/SUB)	2,150	K	mg/kg	0.62	No	No	Yes

Notes:

Risk Based Concentration (RBC) screening values for residential areas from Region 3 Table (dated 10/5/00) unless otherwise noted.
 * = Screening value not listed on RBC tables so a surrogate value was used as directed by risk assessor. Lead value from OSWER for soils in residential areas.
 Soil samples at Site 17 are classified as follows: SS01 is in the Munden-Tetotum Association and SS02, SS03 and SS04 are in the Bohicket Association. Classification based on field description.
 Soil types are described as follows: BKT = Bohicket Association, MT=Munden-Tetotum Association, MT/DA = Munden-Tetotum/Dragsdon-Augusta Association.
 Soil type in parantheses defines the depth sample was collected: SRF = surface, SUB = subsurface, and SRF/SUB = surface and subsurface.
 B = Not detected substantially above the level reported in laboratory or field blanks.
 J = Analyte present. Reported value may not be accurate or precise.
 K = Analyte present. Reported value may be biased high. Actual value is expected lower.
 L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
 NA = Not applicable. RBC standard not set or comparison not available.
 NB = No background concentration calculated.

Table 6

SJC Site 17 Soil Samples - Inorganic Detects Exceeding Ecological Risk Values Compared to Background Samples

Sample ID	Chemical Name	Comparison Criteria	Criterion Value	Background Value	Soil Type	Value	Qualifier	Units	Exceeds Background?
SJS17-SS01-000	Aluminum	BTAG-Soil Flora	1	7,669	MT/DA (SRF)	6,210		mg/kg	No
SJS17-SS02-000	Aluminum	BTAG-Soil Flora	1	30,002	BKT (SRF/SUB)	2,690		mg/kg	No
SJS17-SS02-000P	Aluminum	BTAG-Soil Flora	1	30,002	BKT (SRF/SUB)	3,600		mg/kg	No
SJS17-SS03-000	Aluminum	BTAG-Soil Flora	1	30,002	BKT (SRF/SUB)	5,320		mg/kg	No
SJS17-SS04-000	Aluminum	BTAG-Soil Flora	1	30,002	BKT (SRF/SUB)	5,350		mg/kg	No
SJS17-SS03-000	Cadmium	BTAG-Soil Flora	2.5	NB	NB	9.3	K	mg/kg	NB
SJS17-SS04-000	Cadmium	BTAG-Soil Flora	2.5	NB	NB	5.3	K	mg/kg	NB
SJS17-SS01-000	Chromium	BTAG-Soil Fauna	0.0075	7	MT (SRF)	20.6	K	mg/kg	Yes
SJS17-SS02-000	Chromium	BTAG-Soil Fauna	0.0075	53	BKT (SRF/SUB)	10.9	K	mg/kg	No
SJS17-SS02-000P	Chromium	BTAG-Soil Fauna	0.0075	53	BKT (SRF/SUB)	11.1	K	mg/kg	No
SJS17-SS03-000	Chromium	BTAG-Soil Fauna	0.0075	53	BKT (SRF/SUB)	105	K	mg/kg	Yes
SJS17-SS04-000	Chromium	BTAG-Soil Fauna	0.0075	53	BKT (SRF/SUB)	45.4	K	mg/kg	No
SJS17-SS01-000	Copper	ORNL (1997) soil benchmark ¹	50	17.1	MT/DA (SRF)	102	J	mg/kg	Yes
SJS17-SS02-000	Copper	ORNL (1997) soil benchmark ¹	50	81	BKT (SRF)	183	J	mg/kg	Yes
SJS17-SS02-000P	Copper	ORNL (1997) soil benchmark ¹	50	81	BKT (SRF)	96.7	J	mg/kg	Yes
SJS17-SS03-000	Copper	ORNL (1997) soil benchmark ¹	50	81	BKT (SRF)	569	J	mg/kg	Yes
SJS17-SS04-000	Copper	ORNL (1997) soil benchmark ¹	50	81	BKT (SRF)	5,030	J	mg/kg	Yes
SJS17-SS01-000	Iron	BTAG-Soil Fauna	12	3,669	MT (SRF)	8,850	K	mg/kg	Yes
SJS17-SS02-000	Iron	BTAG-Soil Fauna	12	50,142	BKT (SRF/SUB)	8,210	K	mg/kg	No
SJS17-SS02-000P	Iron	BTAG-Soil Fauna	12	50,142	BKT (SRF/SUB)	8,980	K	mg/kg	No
SJS17-SS03-000	Iron	BTAG-Soil Fauna	12	50,142	BKT (SRF/SUB)	45,200	K	mg/kg	No
SJS17-SS04-000	Iron	BTAG-Soil Fauna	12	50,142	BKT (SRF/SUB)	24,800	K	mg/kg	No
SJS17-SS01-000	Lead	BTAG-Soil Flora	2	61	MT/DA (SRF)	144	K	mg/kg	Yes
SJS17-SS02-000	Lead	BTAG-Soil Flora	2	198	BKT (SRF)	294	K	mg/kg	Yes
SJS17-SS02-000P	Lead	BTAG-Soil Flora	2	198	BKT (SRF)	331	K	mg/kg	Yes
SJS17-SS03-000	Lead	BTAG-Soil Flora	2	198	BKT (SRF)	1,270	K	mg/kg	Yes
SJS17-SS04-000	Lead	BTAG-Soil Flora	2	198	BKT (SRF)	3,130	K	mg/kg	Yes
SJS17-SS01-000	Mercury	BTAG-Soil Fauna	0.058	0.3	MT (SRF)	0.4	L	mg/kg	Yes
SJS17-SS02-000	Mercury	BTAG-Soil Fauna	0.058	0.6	BKT (SRF/SUB)	0.97	L	mg/kg	Yes
SJS17-SS02-000P	Mercury	BTAG-Soil Fauna	0.058	0.6	BKT (SRF/SUB)	0.94	L	mg/kg	Yes
SJS17-SS03-000	Mercury	BTAG-Soil Fauna	0.058	0.6	BKT (SRF/SUB)	1.8	L	mg/kg	Yes
SJS17-SS04-000	Mercury	BTAG-Soil Fauna	0.058	0.6	BKT (SRF/SUB)	0.78	L	mg/kg	Yes
SJS17-SS03-000	Nickel	BTAG-Soil Flora	2	44	BKT (SRF/SUB)	40.3	K	mg/kg	No
SJS17-SS04-000	Nickel	BTAG-Soil Flora	2	44	BKT (SRF/SUB)	193	K	mg/kg	Yes

Tab. 6

SJC Site 17 Soil Samples - Inorganic Detects Exceeding Ecological Risk Values Compared to Background Samples

Sample ID	Chemical Name	Comparison Criteria	Criterion Value	Background Value	Soil Type	Value	Qualifier	Units	Exceeds Background?
SJS17-SS01-000	Vanadium	BTAG-Soil Flora	0.5	26.6	MT (SRF/SUB)	76.7		mg/kg	Yes
SJS17-SS02-000	Vanadium	BTAG-Soil Flora	0.5	72	BKT (SRF/SUB)	19.9		mg/kg	No
SJS17-SS02-000P	Vanadium	BTAG-Soil Flora	0.5	72	BKT (SRF/SUB)	20.7		mg/kg	No
SJS17-SS03-000	Vanadium	BTAG-Soil Flora	0.5	72	BKT (SRF/SUB)	75.3		mg/kg	Yes
SJS17-SS04-000	Vanadium	BTAG-Soil Flora	0.5	72	BKT (SRF/SUB)	1,410		mg/kg	Yes
SJS17-SS01-000	Zinc	BTAG-Soil Flora	10	38	MT (SRF)	221	K	mg/kg	Yes
SJS17-SS02-000	Zinc	BTAG-Soil Flora	10	372	BKT (SRF/SUB)	389	K	mg/kg	Yes
SJS17-SS02-000P	Zinc	BTAG-Soil Flora	10	372	BKT (SRF/SUB)	404	K	mg/kg	Yes
SJS17-SS03-000	Zinc	BTAG-Soil Flora	10	372	BKT (SRF/SUB)	1,570	K	mg/kg	Yes
SJS17-SS04-000	Zinc	BTAG-Soil Flora	10	372	BKT (SRF/SUB)	2,150	K	mg/kg	Yes

Notes:

Soil samples at Site 17 are classified as follows: SS01 is in the Munden-Tetotum Association and SS02, SS03 and SS04 are in the Bohicket Association.

Classification based on field description.

Soil types are described as follows: BKT = Bohicket Association, MT=Munden-Tetotum Association,

MT/DA = Munden-Tetotum/Dragston-Augusta Association.

Soil type in parantheses defines the depth sample was collected: SRF = surface, SUB = subsurface, and SRF/SUB = surface and subsurface.

NA = Not applicable. RBC standard not set or comparison not available.

NB = No background concentration calculated.

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

1. Source: Efroymsen et al. 1997b No BTAG value for soil fauna. Alternate value derived from the results of 24 earthworm studies using a variety of chemical forms and endpoints; value is approximately equivalent to an ER-L.